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California
Education

STATE OF CALIFORNIA,

DEPARTMENT OF EDUCATION.

TWENTY-SECOND BIENNIAL REPORT

OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION

FOR THE

School Years Ending June 30, 1905, and June 30, 1906.

TRANSMITTED TO THE GOVERNOR SEPTEMBER 15, 1906.

SACRAMENTO

W. W. SHANNON, - - - SUPERINTENDENT STATE PRINTING

1906

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GEORGE C. PARDEE, Governor, - - - - - - - Sacramento,
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Secretary of the Board.

MORRIS ELMER DAILEY, - - - - - - - - San José,
President of State Normal School.

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President of State Normal School.

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President of State University.

F. B. DRESSLAR, - - - - - - - - - Berkeley,
Head of Department of Education, State University.

STATE CAPITOL, SACRAMENTO CITY.

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STATE OF CALIFORNIA,

DEPARTMENT OF EDUCATION.

SACRAMENTO, September 14, 1906.

To HIS EXCELLENCY GEORGE C. PARDEE,

Governor of the State of California.

DEAR SIR: I have the honor to transmit to you herewith the Twenty-second Biennial Report of the Department of Education of the State of California, the same being my fourth report, showing the condition of the primary, grammar, and high schools, and of the various State educational institutions, and proceedings of the State Board of Education and of the State Text-Book Committee, for the two school years beginning July 1, 1904, and ending June 30, 1906. I have also included some statistics and reports of a few institutions which are not maintained by the State, but which are recognized as important factors in the work of education.

I wish also to convey to you my very sincere appreciation,—an appreciation which I am confident is shared by all the people of the State,—for the marked interest and attention which, during your official term as Governor, you have given to the cause of public education in California.

Yours very truly,

THOMAS J. KIRK,

Superintendent of Public Instruction.

LINCOLN GRAMMAR SCHOOL -PLACER COUNTY.

TWENTY-SECOND BIENNIAL REPORT OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION.

The first year of the biennial period covered by this report was marked by nothing unusual. There is seen the normal increase in school census and school attendance. Wages of teachers have been perceptibly advanced and there are to be noted general improvements in all school facilities. Some changes in school law, made by the Legislature of 1905, are worthy of note from the fact that they have already had a salutary effect on public education. The most important of these statutory changes is the one providing for the new method of distributing the State School Fund. This has given additional stimulus to school work in the sparsely settled counties and districts of the State. By it a long-standing error and injustice to such counties and districts was corrected. The Act of 1903, providing for State aid to high schools, was so amended as to remove objections to qualifications for admission of non-resident pupils and as to right of participation of certain high schools in such aid.

The schools of the State, both public and private, were represented in a large educational exhibit made at the Lewis and Clark Exposition held in Portland, Oregon, during the summer of 1905. California's display of school work and methods at Portland has been described as the most comprehensive educational exhibit ever seen in the West. The number of high awards in gold and silver medals made there to our State's exhibit in education was very gratifying.

The first nine months of the second year of this biennial period passed without anything occurring of an unusual character. The schools of the State were all in session, the work of education was progressing under favorable conditions in a manner satisfactory to school authorities throughout the State, when, on the 18th of April, 1906, at near the hour of 5:20 A. M., a terrible earthquake, destructive to both life and property, visited San Francisco and vicinity. The line of the quake, in many places breaking through the earth's crust, extended along the coast a distance of over one hundred miles on either side of San Francisco Bay. The disastrous effects were felt inland for from twenty to forty miles. Within this area of disturbance there was a serious loss of life and the greatest loss of property ever known in a disaster. San Francisco suffered an appalling calamity from the fire that followed the quake, and which could not be checked until three fourths of the city

was in ruins and property estimated at fully five hundred millions of dollars was destroyed. The entire business district of the city, an area of about ten square miles, was swept away. The actual number of persons that perished will never be known, but it is estimated that there were fifteen hundred fatalities. School buildings and churches seemed particularly marked for destruction by both the earthquake and the fire following. In San Francisco about one half of all school buildings and churches were destroyed.

In Oakland, Santa Rosa, and other cities many fine school buildings were left in ruins. The State Normal School building at San José was crushed by the earthquake, and that in San Francisco burned. Several

SACRAMENTO HIGH SCHOOL, IN COURSE OF CONSTRUCTION.

of the beautiful structures that were the pride of Stanford University were either defaced or crumbled into fragments.

The biennial convention of county and city school superintendents of California that had been called for May at San Diego was necessarily postponed indefinitely. The National Educational Association had arranged to hold its sessions for 1906 in San Francisco, in July, and this meeting, likewise, was called off.

The remaining days of April and all of May and June were given up almost entirely to the work of relief. During this period the work of the schools was suspended within the disturbed area. At this writing (September 10th) the question of feeding and housing the homeless victims of this greatest of world disasters is still engaging the attention of the various relief committees and societies. Money for relief to the amount of many millions of dollars and supplies of food and clothing came from nearly every state and city in the Union and from many

foreign countries. The National Government gave liberally. Here was proof that "one touch of sorrow makes the whole world kin." The State Legislature was convened in extraordinary session at the call of the Governor. Urgency relief laws were enacted and large appropriations were made for sundry needs growing out of the fearful losses sustained.

The disaster came at the time of year when, under the law, the school census is required to be taken. The taking of the census having thus been prevented, the Legislature provided that all cities, towns, or school districts that had from this cause been prevented from having their school census taken or had their school attendance interrupted, should be privileged to count the census and the average daily school attendance of the next preceding school year, with five per cent added for reasonable increase. A law providing for restoration of teachers' lost certificates and other school documents was also enacted. Notwithstanding this great loss of many millions of revenue-producing property there was practically no shortage in the second installment of State school money.

The City and County of San Francisco has been crippled in school affairs far less than was at first expected. By means of bonds previously provided she will soon rebuild better and more commodious school houses to take the places of those destroyed. Few of her teachers will be dismissed or have their salaries reduced. The work of reconstruction and of rehabilitation in San Francisco has already begun with vigor and determination. The cities of San José, Santa Rosa, Oakland, and the smaller towns about the bay, whose material loss was proportionately as great as that of San Francisco, have, in the five months that have elapsed since the earthquake, been almost wholly restored.

California is too great and grand, too rich and strong, to have even the giant tread of an earthquake, combined with the devastation of a great conflagration, long retard her onward march of progress.

SIXTEENTH-STREET GRAMMAR SCHOOL, SACRAMENTO.

STATE BOARD OF EDUCATION OF CALIFORNIA.

The State Board of Education is composed, by law, of the following officials: The Governor, who is ex-officio president of the board; the Superintendent of Public Instruction, who is ex-officio secretary of the board; the presidents of the five State Normal Schools, the president of the University of California, and the professor of pedagogy of the University of California.

For the two years July 1, 1904, to June 30, 1906, the personnel of the State Board of Education was as follows:

George C. Pardee	Governor President of the Board.
Thomas J. Kirk	Superintendent of Public Instruction Secretary of the Board.
Morris E. Dailey	President of State Normal School at San José
J. F. Millspaugh	President of State Normal School at Los Angeles
C. C. Van Liew	President of State Normal School at Chico
Samuel T. Black	President of State Normal School at San Diego
Frederic Burk	President of State Normal School at San Francisco
Benjamin Ide Wheeler	President of State University
Elmer E. Brown	Professor of Pedagogy at State University

On July 1, 1904, Edward T. Pierce, for many years President of the State Normal School at Los Angeles, retired from that position, and J. F. Millspaugh, of Winona, Minnesota, assumed the presidency of the school, and became a member of the State Board of Education.

There has been one other change in the personnel of the Board. Dr. Elmer E. Brown, for many years head of the Department of Education at the University of California, was in May, 1906, appointed by President Roosevelt United States Commissioner of Education. Dr. Brown was succeeded as a member of the Board by F. B. Dresslar, acting head of the Department of Education of the State University.

In the two school years covered by this report, the State Board of Education has held meetings on the following dates: September 10 and December 3, 1904; January 19, April 12, June 3, August 5, and December 4, 1905; March 2, April 11, and June 28, 1906.

The work of the Board in the past two years has been largely routine. The Board has granted 90 high school life diplomas, 697 grammar school life diplomas, 29 special life diplomas, 3 kindergarten-primary life diplomas, 11 new issue and 5 duplicate life diplomas, 75 university documents, and 187 normal school documents.

MADERA UNION HIGH SCHOOL, MADERA COUNTY.

MADERA GRAMMAR SCHOOL—MADERA COUNTY.

A large part of the time of the sessions of the Board has been devoted to consideration of applications for special high school credentials, under the provisions of Subdivision 2 (*b*) of Section 1521 of the Political Code. Of such applications 179 have been granted, and more than twice that number refused. In order that any candidate might demonstrate his qualifications for such document, the Board arranged for an examination at Chico, Berkeley, and Los Angeles, simultaneously, March 12–15, 1906. But two candidates took this examination; neither passed.

Under the law it is the duty of the Board to designate credentials of other states on which certificates may be issued in this State. The Board has performed this duty and its secretary has from time to time issued bulletins covering these matters.

The work of the State Board of Education in the compilation and revision of State school text-books, and of its committee (the State Text-Book Committee) which has such matter immediately in charge, is detailed in a separate report prepared by the secretary of the committee, Mr. Robert Furlong. (See page 63.)

STATE SUPERINTENDENTS OF PUBLIC INSTRUCTION.

FROM THE ORGANIZATION OF THE STATE GOVERNMENT.

Name.	Elected.	Took Office.
John G. Marvin	Oct. 7, 1850	Jan. 1, 1851
Paul K. Hubbs	Sept. 7, 1853	Jan. 1, 1854
Andrew J. Moulder	Nov. 4, 1856	Jan. 1, 1857
Andrew J. Moulder (second term)	Sept. 7, 1859	Jan. 2, 1860
John Swett	Sept. 3, 1862	Jan. 1, 1863
John Swett (second term)	Oct. 21, 1863	Dec. 1, 1863
O. P. Fitzgerald	Oct. 16, 1867	Dec. 1, 1867
H. N. Bolander	Oct. 18, 1871	Dec. 1, 1871
Ezra S. Carr	Oct. 20, 1875	Dec. 1, 1875
F. M. Campbell	Sept. 3, 1879	Jan. 5, 1880
W. T. Welcker	Nov. 7, 1882	Jan. 1, 1883
Ira G. Hoitt	Nov. 2, 1886	Jan. 3, 1887
J. W. Anderson	Nov. 4, 1890	Jan. 5, 1891
Samuel T. Black	Nov. 6, 1894	Jan. 7, 1895
Charles T. Meredith* (appointed September 24, 1898)		Sept. 25, 1898
Thomas J. Kirk	Nov. 8, 1898	Jan. 3, 1899
Thomas J. Kirk (second term)	Nov. 4, 1902	Jan. 5, 1903

*Appointed to fill the vacancy caused by the resignation of Samuel T. Black.

CITY SUPERINTENDENTS OF SCHOOLS.

JUNE 30, 1906.

City.	County.	Name of Superintendent.
Alameda	Alameda	Fred T. Moore
Berkeley	Alameda	S. D. Waterman
Bakersfield	Kern	D. W. Nelson
Eureka	Humboldt	A. C. Barker
Fresno	Fresno	C. L. McLane
Los Angeles	Los Angeles	E. C. Moore
Marysville	Yuba	James A. Scott
Oakland	Alameda	J. W. McClymonds
Pasadena	Los Angeles	James D. Graham
Pomona	Los Angeles	P. W. Kauffman
Riverside	Riverside	A. N. Wheelock
Sacramento	Sacramento	O. W. Erlewine
Salinas	Monterey	L. F. Kilkenny
San Bernardino	San Bernardino	F. W. Conrad
San Buenaventura	Ventura	James E. Reynolds
San Diego	San Diego	F. P. Davidson
San José	Santa Clara	Geo. S. Wells
Santa Barbara	Santa Barbara	H. A. Adrian
Santa Monica	Los Angeles	D. A. Eckert
Santa Rosa	Sonoma	E. M. Cox
Stockton	San Joaquin	James A. Bart

COUNTY SUPERINTENDENTS OF SCHOOLS.

JUNE 30, 1906.

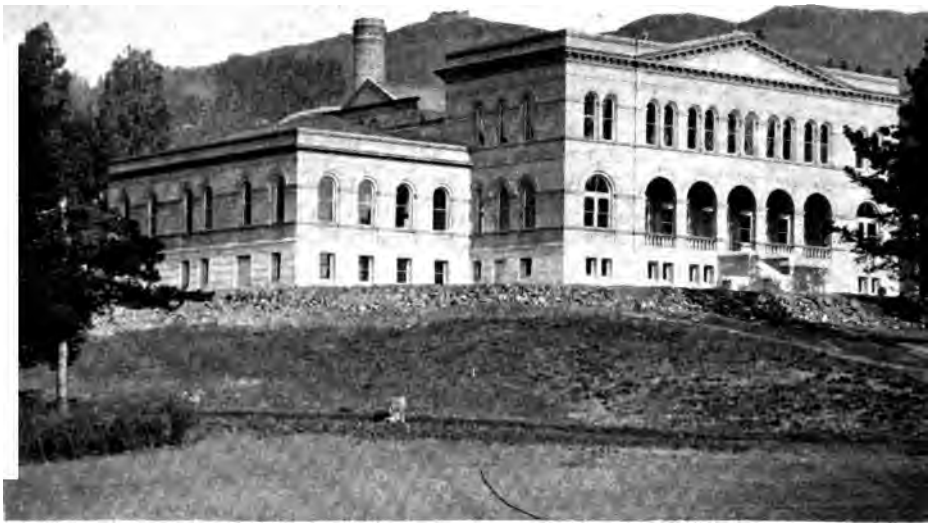
County.	Name.	Address.
Alameda	T. O. Crawford	Oakland
Alpine	Wilda A. Jordan	Markleeville
Amador	George A. Gordon	Jackson
Butte	R. H. Dunn	Oroville
Calaveras	John Waters	San Andreas
Colusa	Lillie L. Laugenour	Colusa
Contra Costa	A. A. Bailey	Martinez
Del Norte	Mrs. A. M. Leishman	Crescent City
El Dorado	S. B. Wilson	Placerville
Fresno	Giles N. Freman	Fresno
Glenn	Frank S. Reager	Willows
Humboldt	George Underwood	Eureka
Inyo	Mrs. M. A. Clarke	Big Pine
Kern	Robert L. Stockton	Bakersfield
Kings	Mrs. N. E. Davidson	Hanford
Lake	Chas. W. Haycock	Lakeport
Lassen	J. F. Dixon	Susanville
Los Angeles	Mark Keppel	Los Angeles
Madera	Estelle Bagnelle	Madera
Marin	James Davidson	San Rafael
Mariposa	Julia L. Jones	Mariposa
Mendocino	J. F. Barbee	Ukiah
Merced	Anna Silman	Merced
Modoc	Nellie Forrest	Alturas
Mono	Cordelia E. Hays	Bridgeport
Monterey	Duncan Stirling	Salinas
Napa	Kate Ames	Napa
Nevada	J. G. O'Neill	Nevada City
Orange	J. B. Nichols	Santa Ana
Placer	C. N. Shane	Auburn
Plumas	Tillie N. Kruger	Quincy
Riverside	Edward Hyatt	Riverside
Sacramento	B. F. Howard	Sacramento
San Benito	John H. Garner	Hollister
San Bernardino	A. S. McPherron	San Bernardino
San Diego	Hugh J. Baldwin	San Diego
San Francisco	Alfred Roncovieri	San Francisco
San Joaquin	E. B. Wright	Stockton
San Luis Obispo	Frederick P. Johnson	San Luis Obispo
San Mateo	Etta M. Tilton	Redwood City
Santa Barbara	W. S. Edwards	Santa Barbara
Santa Clara	D. T. Bateman	San José
Santa Cruz	J. W. Linscott	Santa Cruz
Shasta	Kate A. Brincard	Redding
Sierra	Belle Alexander	Downieville
Siskiyou	Grace Johnson Balfrey	Yreka
Solano	D. H. White	Fairfield
Sonoma	Minnie Coulter	Santa Rosa
Stanislaus	Florence Boggs	Modesto
Sutter	C. W. Ward	Yuba City
Tehama	Ellen A. Lynch	Red Bluff
Trinity	Lizzie H. Fox	Weaverville
Tulare	C. J. Walker	Visalia
Tuolumne	G. P. Morgan	Columbia
Ventura	Geo. L. Sackett	Ventura
Yolo	May E. Dexter	Woodland
Yuba	James A. Scott	Marysville

LIST OF COUNTY SUPERINTENDENTS SINCE 1883.

Counties.	1883-87.	1887-91.	1891-95.	1895-99	1899-1903.	1903-07.
Alameda	P. M. Fisher	P. M. Fisher	George W. Frick	J. P. Garlick	T. O. Crawford	T. O. Crawford
Alpine	Mrs. Anna M. Arnott	Mrs. Harriet A. Grover	Mrs. Anna M. Arnott	Mrs. Harriet A. Grover	Mary Neddenriep	Wilda A. Jordan
Amador	Joseph F. Chandler	George F. Mack	George F. Mack	George F. Mack	George A. Gordon	George A. Gordon
Butte	David W. Braddock	David W. Braddock	G. H. Stout	G. H. Stout	R. H. Dunn	R. H. Dunn
Calaveras	Charles R. Beal	Wm. M. Nuner, Jr.	Wm. M. Nuner, Jr.	E. F. Floyd	John Waters	John Waters
Colusa	J. L. Wilson	J. L. Wilson	Mrs. H. L. Wilson	Mrs. H. L. Wilson	Lillie Laugenour	Lillie Laugenour
Contra Costa	A. A. Bailey	W. A. Kirkwood	W. A. Kirkwood	A. M. Phalin	A. M. Phalin	A. A. Bailey
Del Norte	W. H. Jeter	Mrs. S. G. Wright	Mrs. S. G. Wright	David Leishman	John N. McVay	Mrs. A. M. Leishman
El Dorado	Charles E. Markham	C. B. Wakefield	C. B. Wakefield	T. E. McCarty	T. E. McCarty	S. B. Wilson
Fresno	B. A. Hawkins	B. A. Hawkins	Thomas J. Kirk	Thomas J. Kirk	Geo S. Ramsay; †Giles N. Freman.	Giles N. Freman
Glenn			Wm. M. Finch	Wm. M. Finch	F. S. Reager	F. S. Reager
Humboldt	Neil S. Phelps	J. B. Brown	J. B. Brown	J. B. Brown	James B. Brown	Geo. Underwood
Inyo	Charles H. Groves	J. H. Shannon	J. H. Shannon	S. W. Austin	Clay Hampton	Mrs. M. A. Clarke
Kern	A. B. McPherson	Alfred Harrell	Alfred Harrell	Alfred Harrell	W. C. Doub	Robt. L. Stockton
Kings			C. A. McCourt	J. W. Graham	J. W. Graham	Mrs. N. E. Davidson
Lake	Mack Mathews	James H. Renfro	Mrs. E. K. Hartington	Mrs. E. K. Harrington	Chas. W. Haycock	Chas. W. Haycock
Lassen	Eugene A. Williams	Miss Myra A. Park	Mrs. M. P. Woodin	O. M. Doyle	O. M. Doyle	J. F. Dixon
Los Angeles	John W. Hinton	W. W. Seaman	W. W. Seaman	Spurgeon V. Riley	J. H. Strine	Mark Keppel
Madera			B. A. Hawkins	B. A. Hawkins	Estelle Bagnelle	Estelle Bagnelle
Marin	Adelbert E. Kellogg	Robert Furlong	Robert Furlong	Robert Furlong	Robert Furlong	James Davidson
Mariposa	Wm. D. Egenhoff	Mrs Wm. D. Egenhoff	Mrs. Wm. D. Egenhoff	Julia L. Jones	Julia L. Jones	Julia L. Jones
Mendocino	John C. Ruddock	W. K. Dillingham	Mrs. W. K. Dillingham	George H. Rhodes	J. F. Barbee	J. F. Barbee
Merced	E. T. Dixon	J. A. Norvell	J. A. Norvell	O. W. Grove	O. W. Grove	Anna Silman
Modoc	Mrs. Alice Welch	Mrs. Alice Welch	J. A. Vernon	Anna L. Williams	Anna L. Williams	Nellie Forrest
Mono	Miss Naomi Angell	Clay Hampton	Cornelia Richards	Cornelia Richards	Cornelia Richards	Cordelia E. Hays
Monterey	M. J. Smeltzer	Job Wood, Jr.	Job Wood, Jr.	Job Wood, Jr.	Mrs. J. E. Chope	Duncan Stirling
Napa	John L. Shearer	F. G. Huskey	Annie E. Dixon	Kate Ames	J. A. Imrie	Kate Ames
Nevada	A. J. Tiffany	A. J. Tiffany	W. J. Rogers	W. J. Rogers	W. J. Rogers	J. G. O'Neill
Orange		J. P. Greeley	J. P. Greeley	J. P. Greeley	J. P. Greeley	J. B. Nichols

Placer	O. F. Seavey	R. F. Burns	O. F. Seavey	P. W. Smith	P. W. Smith	C. N. Shane
Plumas	Geo. E. Houghton	B. R. Foss	B. R. Foss; D.C. Reed; Katie L Mullen.	Mrs. Katie L. Donnelley	*M. P. Donnelley	Tillie N. Kruger
Riverside			Lyman Gregory	Edward Hyatt	Edward Hyatt	Edward Hyatt
Sacramento	Charles E. Bishop	B. F. Howard	B. F. Howard	B. F. Howard	B. F. Howard	B. F. Howard
San Benito	J. N. Thompson	J. N. Thompson	J. N. Thompson	J. H. Garner	J. H. Garner	J. H. Garner
San Bernardino	Henry C. Brooke	Henry C. Brooke	G. W. Beattie	Margaret M. Mogeau	Lulu Clair Bahr; †A.S McPherron.	A. S. McPherron
San Diego	Rufus D. Butler	Rufus D. Butler	Harr Wagner	W. J. Bailey	Hugh J. Baldwin	Hugh J. Baldwin
San Francisco	A. J. Moulder	J. W. Anderson	John Swett	*A J. Moulder; Madison Babcock.	Reg'n'ld H. Webster	‡Wm. H. Langdon
San Joaquin	James Sellinger	George Goodell	George Goodell	George Goodell	E. B. Wright	E. B. Wright
San Luis Obispo	J. M. Felts	W. M. Armstrong	W. M. Armstrong	N. Messer	Mrs. A. C. S. Woods	F. P. Johnson
San Mateo	G. P. Hartley	J. F. Utter	J. F. Utter	Etta M. Tilton	Etta M. Tilton	Etta M. Tilton
Santa Barbara	G. E. Thurmond	G. E. Thurmond	G. E. Thurmond	G. E. Thurmond	W. S. Edwards	W. S. Edwards
Santa Clara	L. J. Chipman	L. J. Chipman	L. J. Chipman	L. J. Chipman	L. J. Chipman	D. T. Bateman
Santa Cruz	John W. Linscott	John W. Linscott	John W. Linscott	John W. Linscott	John W. Linscott	John W. Linscott
Shasta	Mrs. D. M. Coleman	Miss E. G. Welch	Mrs. E. G. Logan	Mrs. M. E. Dittmar	Margaret I. Poore	Kate A. Brincard
Sierra	J. S. Wixson	E. L. Case	T. J. McGrath	F. H. Turner	Josie Finane	Belle Alexander
Siskiyou	H. A. Morse	C. O. Sharpe	John Kennedy	C. S. Smith	Effie Persons	Grace Johnson Balfrey
Solano	C. B. Webster	C. B. Webster	C. B. Webster	A. P. Sanborn	D. H. White	D. H. White
Sonoma	Charles S. Smyth	Mrs. F. McG. Martin	Mrs. F. McG. Martin	E. W. Davis	Minnie Coulter	Minnie Coulter
Stanislaus	W. S. Chase	W. B. Howard	W. B. Howard	J. A. Wagener	J. A. Wagener	Florence Boggs
Sutter	M. C. Clark	G. B. Lyman	A. B. Coffey	C. G. Kline	C. G. Kline	C. W. Ward
Tehama	Myron Yager	L. W. Valentine	Belle Miller	O. E. Graves	Mollie Owens; †Lena K. Nangle.	Ellen A. Lynch
Trinity	Horace R. Given	Horace R. Given	George E. Noonan	Lizzie H. Fox	Lizzie H. Fox	Lizzie H. Fox
Tulare	Charles H. Murphy	Charles H. Murphy	S. A. Crookshanks	J. S. McPhaill	S. A. Crookshanks	C. J. Walker
Tuolumne	John T. Murnan	G. P. Morgan	G. P. Morgan	G. P. Morgan	G. P. Morgan	G. P. Morgan
Ventura	Charles T. Meredith	Charles T. Meredith	S. T. Black	George L. Sackett	George L. Sackett	George L. Sackett
Yolo	John W. Goin	George Banks	George Banks	Clara A. March	Mrs. S. E. Peart	§Minnie DeVelbiss
Yuba	Frank B. Crane	Frank B. Crane	H. H. Folsom	James A. Scott	James A. Scott	James A. Scott

*Died October 11, 1895 †Appointed. ‡Resigned. A. Roncovieri appointed. § Died. May E. Dexter appointed.



MECHANICS BUILDING, UNIVERSITY OF CALIFORNIA

NORTH HALL, UNIVERSITY OF CALIFORNIA.

THE UNIVERSITY OF CALIFORNIA.

By ALBERT H. ALLEN,
Manager of the University Press.

Accompanying this statement of the progress of the University of California during the academic years of 1904-05 and 1905-06 are statistical tables showing the number of instructors in all departments of the University in the two-year period 1904-1906; the enrollment of students in all departments during the same period; the number of graduates from all departments during the last two years, with totals of all graduates since 1864 (thus including graduates of the old College of California, 1864-1869); the number of schools accredited in 1904-05 and 1905-06; and, lastly, the list of accredited schools for the school year 1905-06.

Enrollment.—An inspection of these tables shows a steady increase in the total number of students enrolled in all departments of the University during the two years ending June 30, 1906. The totals for these two years were 3,308 and 3,338, respectively, while in 1904 there were 3,285. This steady increase is in spite of fluctuations in the attendance at the professional colleges in San Francisco, the figures for the academic colleges in Berkeley having been for the last four years 2,669, 2,688, 2,699, 2,839, while the total enrollment in the professional departments has been 606, 597, 609, and 499 in the same years.

The Graduate Department has grown from an enrollment of 269 in 1903-04 to 351 in 1905-06. The strength of this department is generally regarded one of the surest indications of the rank of the University among the higher institutions of learning.

In the Academic Colleges at Berkeley the Colleges of Social Sciences, Commerce, Agriculture, Mechanics, and Civil Engineering all show gains in total enrollment, the College of Commerce particularly showing a marked gain from 3.58 per cent of the undergraduate enrollment in 1902-03 to 6.11 per cent of the undergraduate enrollment in 1905-06. On the other hand, the Colleges of Letters, Natural Sciences, Mining, and Chemistry show a falling off in attendance, due, in the case of the College of Chemistry (where the loss is heaviest), to the operation of a new curriculum adopted in 1902, which put this college on a footing with the engineering and technical colleges, rather than with the colleges of general culture.

Women.—The change in the total number of women enrolled in the University during the last two years has been very slight. In 1904-05 the women formed 38.75 per cent of the total enrollment of the Uni-

versity, and 39.87 per cent in 1905-06. In 1902-03 and 1903-04 the proportion of women was 40 per cent and 39 per cent for the respective years. In the Academic Colleges in Berkeley the proportion of women is somewhat larger, the percentages of enrollment in the Academic Colleges for the last four years being 43.27, 41.59, 41.08, and 41.28, the last being the proportion for 1905-06. Of undergraduate students the women form at present very little over 40 per cent. In 1903-04 this proportion was very nearly 42 per cent. In the Colleges of Letters, Social Sciences, and Natural Sciences is found the largest enrollment of women. In the College of Social Sciences they formed nearly 72 per cent in 1905-06.

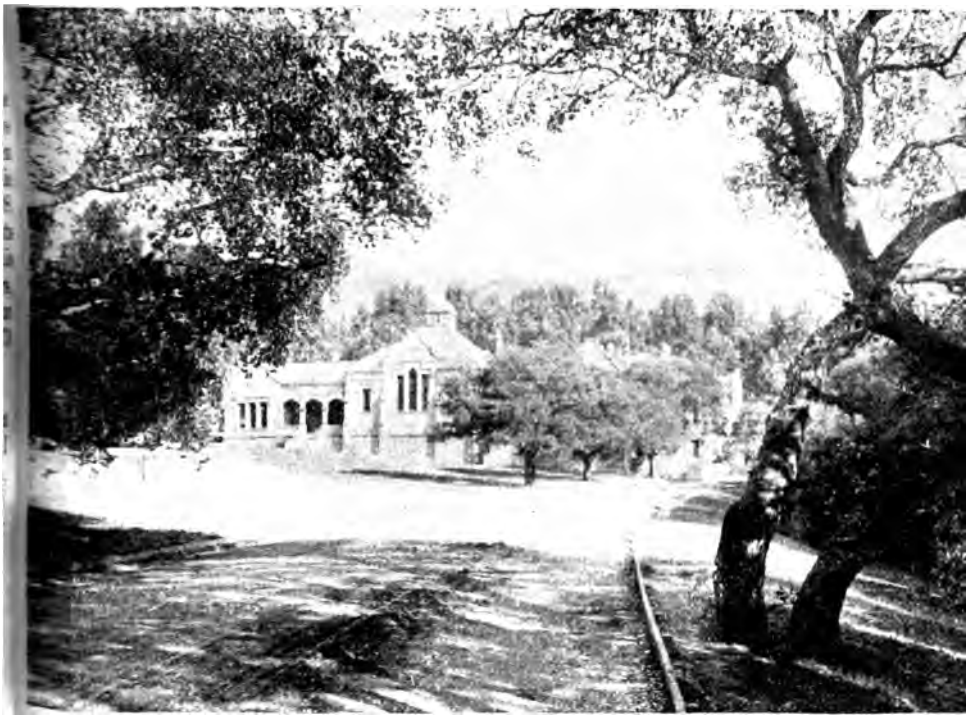
Officers of Instruction.--Some increase in the officers of instruction of the Academic Colleges was made for the year 1904-05, and the total number of officers of instruction for that year was brought to 345, against 327 for the year before. In 1905-06 the Post-Graduate Medical Department was discontinued, and other slight reductions at Lick Observatory and in the Medical Department brought the total number to 318. In 1905-06 the number of full professors in the Academic Colleges was 37, of associate professors 19, and of assistant professors 50.

The Bancroft Library.--The University became the possessor of the famous library of H. H. Bancroft in November, 1905. The purchase price was $250,000, of which Mr. Bancroft, the collector of the library, generously donated $100,000. This library is one of the most valuable acquisitions secured by the University in many years, and will provide an inexhaustible field of research for students of history, especially of the history of the western part of the United States. This priceless collection fortunately escaped the fire in San Francisco, and as soon as possible thereafter was removed to Berkeley, where it has been provisionally installed in a place provided for it in California Hall.

The Karl Weinhold Library.--Through the generosity of Mr. John D. Spreckels, the University has secured the library of the late Professor Karl Weinhold, of the University of Berlin. This library is one of the best Germanistic collections available, consisting of some six thousand bound volumes and over two thousand unbound monographs. Several other libraries of distinguished Germanists have been brought to this country, but none so large or so rich in bibliographical treasures as that of Weinhold. The gift of this splendid collection makes the German Department of the University one of the best equipped in the United States.

The Hearst Archaeological Collection.--In November, 1905, Mrs. Phœbe Apperson Hearst presented to the University the collection of archæological material made by her during the past seven years at a cost of more than $400,000. This gift is in addition to the regular provision made by Mrs. Hearst for the work of the Department of Anthropology and for the support of expeditions in Peru and Egypt.

Peruvian Antiquities Received.--In March, 1906, the Museum of the Department of Anthropology received a large collection of antiquities from Peru. This shipment is of particular interest, as it is the last to



CHEMISTRY BUILDING, UNIVERSITY OF CALIFORNIA

A ROOM IN THE CHEMISTRY LABORATORY, UNIVERSITY OF CALIFORNIA.

leave Peru owing to recent regulations made by the government of that country requiring all such collections hereafter to be deposited in the Peruvian National Museum. This collection was made by Dr. Max Uhle, who had been in charge of explorations in Peru on behalf of the

GENERAL VIEW OF PLAN FOR THE GREATER UNIVERSITY, LOOKING EAST.

University since 1899, and who recently resigned to accept the position of Director of the Peruvian National Museum. The aim of Dr. Uhle's research has been to establish the chronology of the types of culture found, and his discoveries have made it possible to trace for the first time an historical sequence in ancient Peruvian history.

Egyptian Antiquities.—The Museum of the Department of Anthropology has recently received from Egypt one hundred and eighty-five cases of Egyptian antiquities collected by Dr. G. A. Reisner, Director of the Hearst Egyptian Expeditions of the University. These two collections, from Peru and Egypt, are the results of several years of research and exploration carried on in the name of the University through the generosity of Mrs. Phœbe A. Hearst. To carry their work

DETAIL OF PLAN FOR THE GREATER UNIVERSITY- LOOKING EAST ALONG MAIN AXIS TO THE AUDITORIUM, SHOWING THE CAMPANILE.

to completion, Dr. Reisner and Dr. Uhle are now engaged in the preparation of reports and other publications bearing upon their discoveries.

University Buildings and Grounds.—The New California Hall was dedicated to the use of the University at a University meeting on January 15, 1906. The speakers were President Benjamin Ide Wheeler, Judge W. H. Waste, and State Senator G. R. Lukens. Judge Waste

and Senator Lukens described the passage in 1904 of the bill appropriating $250,000 for the erection of this building.

During the spring of 1905 another permanent improvement was completed by the reconstruction of the south drive on the University grounds. The road has been made of twelve inches of solid macadam, with cement combination sidewalk, curb, and gutter.

The Hearst Memorial Mining Building, the corner-stone of which was laid in 1902, will be ready for the use of the College of Mining in the fall of the present year. This building is the largest of those yet constructed in accordance with the permanent plan for the future growth of the University. Its equipment will add immeasurably to the facilities of the College of Mining. One of the interesting features of the building is to be a Museum of Mining and Metallurgy, which will contain models of mines and mining machinery, collections of ores from various important mines, and specimens showing the progress of the ore from its raw state throughout various processes to the finished metal.

During the winter just past, a small but attractive building was erected near the north entrance to the University for the temporary use of the Department of Architecture. This building forms no part of the permanent plan, but provides much needed facilities for Professor John Galen Howard, Consulting Architect of the University, and his staff.

On Charter Day, March 23, 1906, the gratifying news was made public that Mrs. Elizabeth J. Boalt, widow of Judge John H. Boalt, had made to the University a gift of $100,000 for the erection of a building to be known as the Boalt Law Building. This building, as well as the Doe Library, has not yet been commenced. Their locations, however, have been determined upon and plans for their construction are well under way.

Symphony Concerts in the Greek Theater.—On February 15, 1906, was given the first of the series of symphony concerts in the Greek Theater, by a professional orchestra, under the direction of Dr. J. Frederick Wolle, Professor of Music in the University of California. The expenses of this series of concerts were guaranteed by a generous friend of the University, but the support received from the public insured the financial success of the concerts from the very first. Audiences of from three thousand five hundred to nearly six thousand people attended these concerts, of which six were given before the close of the University in May, 1906.

Aside from the symphony concerts, the regular Sunday afternoon half-hour of music in the Greek Theater has been a feature of University life. At different times concerts by visiting musical organizations and notable dramatic performances have emphasized the value of this unique auditorium not only to the University but to the whole community. Among noteworthy dramatic performances in the Greek Theater may be mentioned the performance of Hamlet in October, 1904, by Ben Greet's company of players; the presentation in Greek of the Ajax of Sophocles by students and members of the faculty of the University in the same month; Sarah Bernhardt's production of Phédre, and Constance Crawley's presentation of A Midsummernight's Dream during the present year.

The University Farm.—The commission appointed to select the University Farm, for the purchase of which an appropriation of $150,000 was made at the last regular session of the Legislature, brought to a close its search for a site by deciding upon a tract of seven hundred and eighty acres of land near Davisville, in Yolo County. The cost of the land to the State was in the neighborhood of $100,000. The balance of

DETAIL OF PLAN FOR THE GREATER UNIVERSITY—SHOWING THE GREEK THEATER AND THE PROPOSED AUDITORIUM.

the appropriation will be used for the erection of buildings, for the purchase of necessary equipment and supplies, and for running expenses.

The New Pathological Experiment Station.—The same session of the Legislature which made appropriation for the University Farm set aside $30,000 for the establishment of an Experiment Station and a Laboratory of Plant Pathology in the southern part of the State. The

Laboratory will be built at Whittier on land donated by the citizens of the town, while the Experiment Station will be established on a tract of about twenty acres of land near Riverside, the use of which has been given to the University for twenty years, rent free, by the Huntington Park Association. The Experiment Station and the Laboratory are to be devoted to the study and determination of plant and tree diseases and pests and their remedies.

Control of Asparagus Rust.—Of great value to the State of California have been the methods suggested by Professor Ralph Smith, Plant Pathologist of the University, for the control of asparagus rust. Property to the value of $2,500,000 in asparagus beds has been saved to the State by the control of this particular blight.

The Herzstein Lectures.—During the past two years Dr. Morris Herzstein of San Francisco has provided for a series of lectures on subjects of interest to students of medicine. These lectures were given in 1904 and 1905 by Dr. Alonzo Engelbert Taylor, Professor of Pathology in the University of California. Dr. Herzstein has further testified to his interest in the University by the equipment of a laboratory for biological research at New Monterey, California. The Herzstein Research Laboratory is under the direction of Professor Jacques Loeb of the Department of Physiology, and supplements the Spreckels Laboratory in Berkeley, to the equipment of which Dr. Herzstein also contributed.

The Marine Biological Laboratory at La Jolla.—The Marine Biological Association of San Diego, a voluntary organization of public-spirited citizens, has equipped and placed under the direction of the University a biological laboratory for the use of the Department of Zoölogy. Research work in the marine life of the San Diego region can be carried on at this laboratory in all seasons.

The Agassiz Expedition.—During the winter of 1904-05 Dr. Charles A. Kofoid, Associate Professor of Zoölogy, accompanied an expedition directed by Professor Alexander Agassiz of Harvard University to the tropical Pacific on the U. S. S. Albatross. Professor Kofoid was in charge of all the pelagic operations of the expedition, and supervised the plankton collections.

The Lick Observatory Eclipse Expeditions.—In the summer of 1905, the Lick Observatory sent out three expeditions to study the eclipse of the sun that occurred on August 30. Three widely separated stations, located in Labrador, Spain, and Egypt, were equipped with instruments identically designed for securing comparative evidences on various eclipse problems. The three expeditions were provided for by the generosity of Mr. William Crocker, who also fitted out a similar eclipse expedition in 1900.

The Mills Astronomical Expedition.—Mr. D. O. Mills has extended for five years his support of the Mills Astronomical Expedition to the Southern Hemisphere, which he has maintained for the past four years.

The sum of $6,000 a year is promised, with an addition of $3,000 for the improvement of the station near Santiago, Chile. The particular object of the station is the study of the movement of double stars in the line of sight.

The Seventh Satellite of Jupiter.—In February, 1905, the Director of the Lick Observatory made public the discovery by Assistant Astronomer C. D. Perrine of a seventh satellite of Jupiter.

Le Conte Memorial Lodge.—In the summer of 1904 a Memorial Lodge was dedicated in the Yosemite Valley to Professor Joseph Le Conte.

THE CONSERVATORY, BOTANICAL GARDENS.

Friends and former students of Professor Le Conte contributed in the neighborhood of $5,000 for the construction of this lodge. After the cost had been subscribed a contribution of some $500 was received from a number of graduates of the University living in South Africa. This contribution was used for the purpose of securing a bronze bust of Professor Le Conte to be put in the lodge.

Prizes at the Louisiana Purchase Exposition.—Five grand prizes were awarded to the University for its exhibit at the Exposition in St. Louis. One grand prize was for the exhibit as a whole; the second grand prize was for the Lick Observatory exhibit as a whole; the third grand prize was for the exhibit made by the College of Mines, illustrating the facilities at hand at Berkeley for instruction in Mining Engineering; the fourth grand prize was for the exhibit of stellar and other photo-

graphs sent from the Lick Observatory; and the fifth grand prize was for the exhibit of soil samples showing the depth and character of certain soil-types in California, and illustrating the investigations of Professors Hilgard and Loughridge.

Visiting Associations.—In August, 1905, the American Anthropological Association held its annual session in San Francisco and in Berkeley. The president of the association is Professor Frederick Ward Putnam, head of the Department of Anthropology of the University of California and also of Harvard University. In March, 1906, the Association of American Universities held its seventh annual meeting at the University of California and at Stanford University. This association is composed not of individuals but of institutions, namely, according to the constitution of the organization, of those engaged in graduate or advanced instruction. The object of the association is the promotion of the university as distinguished from the college. The University of California was honored by the association by being chosen president for the coming year.

Prominent Visitors.—Among the many visitors to the University who have addressed University meetings or have been otherwise identified for the time being with the life of the University may be mentioned during the year 1905-06: Mr. Poultney Bigelow; Professor Rufus B. Richardson, Director of the American School of Classical Studies at Athens; H. Rider Haggard, the well-known author and student of social conditions; Reverend Emil H. Hirsch, Professor of Rabbinical Literature at the University of Chicago; Honorable William H. Taft, Secretary of War, and a congressional party en route for the Philippine Islands; Dr. Robert S. Woodward, President of the Carnegie Institute; Mr. William Jennings Bryan; Mr. Richard Mansfield; Dr. Douglas Hyde, President of the Gaelic League; and Dr. Edward T. Devine, Special Representative of the American National Red Cross for the relief work in San Francisco.

The Charter Day addresses in 1905 and 1906 were delivered by Dr. Henry Van Dyke, Professor of English Literature in Princeton University, and President Edwin A. Alderman of the University of Virginia.

Summer Sessions.—The Summer Session of 1905 was attended by 795 enrolled students. Courses of instruction were given in 25 departments, by a faculty of 76. In the Summer Session of 1906, notwithstanding the disaster in San Francisco, 706 students enrolled, and a faculty of 78 gave courses in 30 departments. A new feature of this session was a very successful Summer School of Library Methods.

UNIVERSITY OF CALIFORNIA—TABLE No. 1.

Summary of Officers of Instruction and Research, 1904-1906.

NOTE.—The Summary includes officers of instruction of all grades in the Academic Colleges, at Berkeley, but omits clinical assistants in the Professional Colleges, in San Francisco.

	1904-05.	1905-06.
Academic	251	252
Art	9	9
Lick Observatory	13	9
Law	6	6
Medicine	35	34
Post-Graduate Medicine	23	*
Pharmacy	8	8
Totals	345	318

*Department discontinued.

UNIVERSITY OF CALIFORNIA—TABLE No. 2 A.

Enrollment in the Academic Colleges, 1904-1906.

NOTE.—The upper figures on the left of each group refer to men, the lower to women; the figures on the right side are totals.

	1904-05		1905-06.	
GRADUATE STUDENTS	141 102	243	155 196	351
UNDERGRADUATE STUDENTS:—				
Letters (or Classical Course)	70 145	215	65 129	194
Social Sciences (or Literary Course)	274 740	1014	290 764	1054
Natural Sciences	81 108	189	88 103	191
Commerce	119 6	125	149 5	154
Agriculture	96 10	106	115 8	123
Mechanics	264 2	266	267 0	267
Mining	285 0	285	271 0	271
Civil Engineering	207 0	207	211 0	211
Chemistry	55 7	62	48 6	54
Total Undergraduates	1451 1018	2469	1504 1015	2519
Totals in the Colleges at Berkeley (deducting duplicates)	1590 1109	2699	1647 1192	2839

UNIVERSITY OF CALIFORNIA--TABLE No. 2 B.

Enrollment in the Professional Colleges and Lick Observatory, 1904-1906.

NOTE.—The upper figures on the left of each group refer to men, the lower to women; figures on the right side are totals.

	1904-05.		190
LICK OBSERVATORY,	3		3
MT. HAMILTON	0	3	1
IN SAN FRANCISCO –			
Mark Hopkins Institute of Art	94 149	243	75 120
Hastings College of the Law	74 5	79	74 2
College of Medicine	88 12	100	64 9
Postgraduate Medical Department	12 2	14	Departm Discon
College of Dentistry	85 2	87	71 3
California College of Pharmacy	83 3	86	76 5
Total in the Colleges in San Francisco	436 173	609	360 139

UNIVERSITY OF CALIFORNIA—TABLE No. 3 A.

Degrees Conferred in the Academic Colleges of the University of California, 1904-1906.

pper figures on the left of each group refer to men, the lower to women; the ght side are totals. Abbreviations: Agr., Agriculture; C.E., Civil Engineering; ry; Com., Commerce; L., Letters; Mec., Mechanics; Min., Mining: N.S., Natural ocial Sciences.

	1904.		1905.		1906.*		Totals, 1904-1906.		Totals, 1864-1906.	
	17		14		16		47		425	
	47	64	37	51	38	54	122	169	336	761
	4		4		6		14		110	
	1	5	5	9	7	13	13	27	41	151
	0		{Not regularly con-}				0		158	
	1	1	{ ferred since 1904. }				1	1	117	275
	28		36		37		101		361	
	130	158	108	144	105	142	343	444	801	1,162
	3		2		1		6		19	
	7	10	3	5	9	10	19	25	48	67
	5		6		11		22		53	
	2	7	2	8	0	11	4	26	5	58
	31		20		21		72		238	
	0	31	0	20	0	21	0	72	1	239
	30		22		36		88		264	
	0	30	0	22	0	36	0	88	0	264
	18		19		32		69		187	
	0	18	0	19	0	32	0	69	2	189
	15		14		8		37		149	
	6	21	2	16	2	10	10	47	31	180
	6		12		22		40		55	
ince 1899)...	0	6	1	13	0	22	1	41	1	56
	13		16		13		42		133	
	26	39	20	36	14	27	60	102	153	286
	4		5		7		16		58	
	2	6	3	8	0	7	5	21	15	73
	0		0		0		0		1	
	0	0	0	0	0	0	0	0	0	1
	5		4		4		13		30	
	0	5	0	4	0	4	0	13	3	33
	0		0		0		0		4	
ry)	0	0	0	0	0	0	0	0	0	4
	0		0		0		0		2	
y)	0	0	0	0	0	0	0	0	0	2
	179		174		214		567		2,580	
	222	401	181	355	175	389	578	1,145	1,656	4,236

clude December graduates.

UNIVERSITY OF CALIFORNIA—TABLE No. 2 B.

Enrollment in the Professional Colleges and Lick Observatory, 1904-1906.

NOTE.—The upper figures on the left of each group refer to men, the lower to women; the figures on the right side are totals.

	1904-05.		1905-06.	
LICK OBSERVATORY, MT. HAMILTON	3 0	3	3 1	4
IN SAN FRANCISCO –				
Mark Hopkins Institute of Art	94 149	243	75 120	195
Hastings College of the Law	74 5	79	74 2	76
College of Medicine	88 12	100	64 9	73
Postgraduate Medical Department	12 2	14	Department Discontinued	
College of Dentistry	85 2	87	71 3	74
California College of Pharmacy	83 3	86	76 5	81
Total in the Colleges in San Francisco	436 173	609	360 139	499

UNIVERSITY OF CALIFORNIA—TABLE No. 3 A.

Summary of Degrees Conferred in the Academic Colleges of the University of California, 1904-1906.

NOTE.—The upper figures on the left of each group refer to men, the lower to women; the figures on the right side are totals. Abbreviations: Agr., Agriculture; C.E., Civil Engineering; Chem., Chemistry; Com., Commerce; L., Letters; Mec., Mechanics; Min., Mining: N.S., Natural Sciences; S S., Social Sciences.

	1904.		1905.		1906.*		Totals, 1904-1906.		Totals, 1864-1906.	
A.B.	17 47	64	14 37	51	16 38	54	47 122	169	425 336	761
M.A.	4 1	5	4 5	9	6 7	13	14 13	27	110 41	151
Ph.B.—S.S.	0 1	1	{Not regularly conferred since 1904.}				0 1	1	158 117	275
B.L.—S.S.	28 130	158	36 108	144	37 105	142	101 343	444	361 801	1,162
M.L.—S.S.	3 7	10	2 3	5	1 9	10	6 19	25	19 48	67
B.S. Agr.	5 2	7	6 2	8	11 0	11	22 4	26	53 5	58
B.S. Mec.	31 0	31	20 0	20	21 0	21	72 0	72	238 1	239
B.S. Min.	30 0	30	22 0	22	36 0	36	88 0	88	264 0	264
B.S. C.E.	18 0	18	19 0	19	32 0	32	69 0	69	187 2	189
B.S. Chem.	15 6	21	14 2	16	8 2	10	37 10	47	149 31	180
B.S. Com. (since 1899)	6 0	6	12 1	13	22 0	22	40 1	41	55 1	56
B.S. N.S.	13 26	39	16 20	36	13 14	27	42 60	102	133 153	286
M.S.	4 2	6	5 3	8	7 0	7	16 5	21	58 15	73
C.E.	0 0	0	0 0	0	0 0	0	0 0	0	1 0	1
Ph.D.	5 0	5	4 0	4	4 0	4	13 0	13	30 3	33
LL.D. (Honorary)	0 0	0	0 0	0	0 0	0	0 0	0	4 0	4
Sc.D. (Honorary)	0 0	0	0 0	0	0 0	0	0 0	0	2 0	2
Totals	179 222	401	174 181	355	214 175	389	567 578	1,145	2,580 1,656	4,236

* Does not include December graduates.

UNIVERSITY OF CALIFORNIA—TABLE No. 3 B.

Summary of Degrees Conferred in the Professional Colleges, 1904-1906.

	1904.		1905.		1906.*		Totals, 1904-1906.		Totals, 1874-1906.	
LL.B.—Hastings	17 1	18	17 1	18	15 1	16	49 3	52	727 14	741
LL.B.—S.S.	3 0	3	1 0	1	Discontin'd		4 0	4	7 0	7
J.D.—S.S.					2 1	3	2 1	3	2 1	3
LL.B.—Letters	0 0	0	1 0	1	Discontin'd		1 0	1	1 0	1
M.D.	29 4	33	16 2	18	17 2	19	62 8	70	580 50	630
D.D.S.	44 1	45	40 0	40	22 2	24	106 3	109	648 29	677
Ph.G.	18 5	23	Degree discontinued				18 5	23	550 28	578
Ph.C.			36 1	37	22 3	25	58 4	62	58 4	62
Pharm. D.	Degree discontinued, 1902.								2 0	2
Pharm. B.	0 0	0	0 0	0	3 0	3	3 0	3	6 0	6
D.V.S.	Department discontinued, 1901.								10 0	10
Total degrees	111 11	122	111 4	115	81 9	90	303 24	327	2,591 126	2,717

* Does not include December graduates.

UNIVERSITY OF CALIFORNIA—TABLE No. 4.

Number of Accredited Schools, 1904-1906.

	1904-05.	1905-06.
Number of public high schools accredited	99	106
Number of private secondary schools accredited	21	23
Total number of schools accredited	120	129

LIST OF ACCREDITED SCHOOLS, 1905-1906.

Recommended graduates who wish to postpone their entrance to the University should send their recommendations, with specific request for extension, to the Recorder of the Faculties. Extension may be granted for one year, with the possibility of renewal, upon request. Recommendations become invalid if not presented within twenty months after graduation.

Recommendations in free-hand and geometrical drawing are subject to approval by the Department of Drawing after the applicant has entered the University. Graduates of accredited schools who enter the University of California should carry their drawings with them to the University for inspection by the Department.

PUBLIC SCHOOLS.

Alameda High School.—George C. Thompson, Ph.D.
Alhambra High School.—A. C. Wheat, M.D.
Anaheim High School.—Mr. J. Franklin Walker.
Arcata Union High School.—Mr. J. M. Horton.
Auburn: Placer County High School.—Mr. F. J. Buchanan.
Azusa: Citrus Union High School.—Mr. W. A. Sheldon.
Bakersfield: Kern County High School.—Mr. C. C. Childress.
Berkeley High School.—Mr. M. C. James.
Campbell Union High School.—Mr. J. Fred Smith.
Centerville Union High School.—Mr. G. W. Wright.
Chico High School.—Mr. W. M. Mackay.
Colton High School.—Mr. G. M. Green.
Colusa District High School.—Mr. A. B. Anderson.
Compton Union High School.—Mr. Will L. Frew.
Concord: Mount Diablo Union High School.—Mr. Herbert Kittredge.
Corona High School.—Mr. J. C. Ray.
Covina High School.—Mr. Arthur L. Hamilton.
Etna Mills: Etna Union High School.—Mr. George Harkleroad.
Eureka High School.—Mr. A. C. Barker.
Fairfield: Armijo Union High School.—Mr. H. F. Sheldon.
Fallbrook Union High School.—Mr. C. T. Meredith.
Fernando: San Fernando Union High School.—Mrs. E. C. Ingham.
Fowler Union High School.—Mr. J. N. Keran.
Fresno High School.—Mr. A. C. Olney.
Fullerton Union High School.—Mr. W. R. Carpenter.
Gilroy High School.—Mr. E. E. Brownell.
Glendale Union High School.—Mr. George U. Moyse.
Grass Valley High School.—Mr. J. S. Hennesey.
Hanford Union High School.—Mr. E. H. Walker.
Haywards High School.—John Gamble, Ph.D.
Healdsburg High School.—Mr. H. R. Bull.
Hollister: San Benito High School.—Mr. James Davis.
Hollywood Union High School.—Mr. J. O. Churchill.
Ione Union High School.—Mr. William Inch.
Lakeport: Clear Lake Union High School.—A. A. MacKenzie, D.S.C.
Livermore Union High School.—Mr. W. J. Connell.
Lodi High School.—Mr. J. B. Wootten.
Lompoc Union High School.—Mr. W. P. Campbell.
Long Beach High School.—Mr. Albert B. Clayton.
Los Angeles High School.—Mr. W. H. Housh.
Los Banos: West Side Union High School.—Mr. George H. Hunting
Los Gatos High School.—Mr. Charles I. Kerr.
Madera Union High School.—Mr. E. B. Williams.
Martinez: Alhambra Union High School.—Mr. E. W. Stoddard.
Marysville High School.—Mr. Allen B. Martin.
Mendocino High School.—Mr. Ovid H. Ritter.
Merced: Merced County High School.—Mr. J. B. Hughes.
Modesto High School.—Mr. Thomas Downey.
Monrovia High School.—Mr. Nathan F. Smith.
Mountain View High School.—Mr. Herbert Lee.
Napa High School.—Mr. Francis O. Mower.
National City High School.—Mr. T. F. Brownscombe.
Nevada City High School.—Mr. E. H. Barker.
Oakland High School.—Mr. J. H. Pond.
Ontario High School.—Mr. Jefferson Taylor.
Orange Union High School.—Mr. Charles E. Taylor.
Oroville Union High School.—Mr. W. W. Fogg.
Oxnard Union High School.—Mr. J. S. Denton.
Pacific Grove High School.—Mr. Albert G. Morse.
Palo Alto High School.—Mr. Charles C. Hill.
Pasadena High *School.—Mr. LeRoy* D. Ely.

Paso Robles High School.—Mr. E. E. Taylor.
Petaluma High School.—Mr. J. B. Newell.
Pomona High School.—Mr. P. W. Kauffman.
Porterville High School.—Mr. Mark DeWitt.
Red Bluff Union High School.—Mr. Glenn Allen.
Redding: Shasta County High School.—Mr. Benjamin Macomber.
Redlands Union High School.—Mr. Lewis B. Avery.
Redwood City: Sequoia Union High School.—Mr. S. P. McCrea.
Riverside High School.—Miss Eugenie Fuller.
Sacramento High School.—Mr. Frank Tade.
Saint Helena Union High School.—Mr. R. E. Chase.
Salinas High School.—Mr. Lucas E. Kilkenny.
San Bernardino High School.—Lewis M. Terman, Ph.D.
San Diego High School.—Mr. Duncan MacKinnon.
San Francisco: Girls' High School.—A. W. Scott, M.D.
San Francisco: Lowell High School.—Mr. F. C. Morton.
San Francisco: Mission High School.—Mr. J. O'Connor.
San Francisco: Polytechnic High School.—Mr. W. N. Bush.
Sanger Union High School.—Mr. R. Y. Glidden.
San José High School.—R. D. Hunt, Ph.D.
San Luis Obispo High School.—Mr. J. A. Metzler.
San Mateo Union High School.—Mr. F. G. Sanderson.
San Rafael High School.—Mr. John S. Drew.
Santa Ana High School.—Mr. J. C. Templeton.
Santa Barbara High School.—Mr. A. E. Monteith.
Santa Clara High School.—Mr. L. R. Smith.
Santa Cruz High School.—Mr. D. C. Clark.
Santa Maria Union High School.—Mr. E. L. Mitchel.
Santa Monica High School.—Mr. D. A. Eckert.
Santa Paula Union High School.—Mr. G. S. Trowbridge.
Santa Rosa High School.—Mr. E. M. Cox.
Santa Ynez: Valley Union High School.—Mr. Francis G. Goodenow
Sonoma: Sonoma Valley Union High School.—Mr. DeWitt Montgomery.
Stockton High School.—Carlton M. Ritter, Ph.D.
Sutter City Union High School.—Mr. W. H. Weslar.
Truckee: Meadow Lake Union High School.—Mr. Leroy H. Stephens.
Ukiah High School.—Mr. L. W. Babcock.
Vacaville Union High School.—Mr. Carl H. Nielsen.
Ventura Union High School.—Mr. Alfred D. Tenney.
Visalia High School.—Mr. F. A. Swanger.
Watsonville High School.—Mr. Irving Townsend.
Whittier High School.—Mr. G. Walter Monroe.
Willows: Glenn County Union High School.—Mr. J. R. Hanlon.
Woodand High School.—Mr. W. M. Hyman.
Yreka: Siskiyou County High School.—Mr. Frederick Liddeke.

Total public schools, 106.

PRIVATE SCHOOLS.

Belmont School.—Mr. W. T. Reid.
Berkeley: Boone's University School.—Mr. P. R. Boone.
Berkeley: Miss Head's School.—Miss Anna Head.
Berkeley Preparatory School.—Mr. J. H. White.
College Park: Academy of the University of the Pacific.—Mr. H. C. Tillman.
Irvington: Anderson Academy.—Mr. W. W. Anderson.
Los Angeles: Harvard School.—Mr. Grenville C. Emery.
Mills College, Seminary Department.—Susan L. Mills, Litt.D.
Oakland: Academy of California College.—T. G. Brownson, D.D.
Oakland: Horton School.—Miss Sarah W. Horton.
Pasadena: Throop Polytechnic Institute.—Walter A. Edwards, LL.D.
San Francisco: California School of Mechanical Arts.—Mr. George A Merrill.
San Francisco: College of Notre Dame.—Sister J. Teresa.
San Francisco: Hamlin School.—Miss Sarah D. Hamlin.
San Francisco: Irving Institute.—Mrs. E. B. Church.
San Francisco: Trinity School.—Mr. H. C. Lyon.
San José: College of Notre Dame.—Sister Mary Bernardine.
San José: Notre Dame High School.—Sister Louise of St. Joseph.
San José: Washburn School.—Mr. Arthur Washburn.
San Mateo: Saint Matthew's School.—Mr. W. A. Brewer.
San Rafael: Dominican College.—Mother Mary Louis.
San Rafael: Hitchcock Military Academy.—Mr. C. Hitchcock.
San Rafael: Mt. Tamalpais Military Academy.—Arthur Crosby, D.D.

Total private schools, 23.
Total public and private schools, 129.

BERKELEY, June 26, 1906.

THE UNIVERSITY OF CALIFORNIA.

AN HISTORICAL SKETCH.

By HARRY ALLEN OVERSTREET.

A monograph published by the Department of Education, California Louisiana Purchase Exposition Commission, San Francisco, Cal., 1904.

It is significant of the place which the University of California holds in the political organization of which it is a part, that its date of birth, in organic idea, is one with the birth-date of the State. The very first Constitution of the incipient commonwealth prescribed measures for the protection and proper disposition of lands granted for the support of a university of the State and made it a duty of the Legislature to "provide effectual means for the improvement and permanent security of the funds of said university."

But although a university of the State was thus called for by the Constitution of 1849, it was not until 1868 that the University of California was founded. The intervening years were years of preparation, with their many uncertainties as to the character of the new institution, their tentative suggestions and rejected plans, and often their periods of gloomy doubt as to the whole affair. Throughout them all, however, are found the traces of steadfast effort on the part of a small body of earnest men toward the accomplishment of the wished-for end. These men in public and private utterances made the voters of California alive to the vital need of an adequate university, and by the educative influence of their arguments kept the public pressure on the Legislature sufficiently firm.

The Constitution of 1849 had not been able to make definite provision for the support of the proposed university, but the Constitutional Convention had prayed Congress to adopt such measures that "seventy-two sections of the unappropriated lands within the State should be set apart and reserved for the use and support of the university, which, together with such further quantities as might be agreed upon by Congress, should be conveyed to the State and appropriated solely to the use and support of the university." Congress responded affirmatively in 1853 with a grant of forty-six thousand and eighty acres for a "seminary of learning."

With the income from these lands assured, the support of some kind of an institution appeared a certainty, and resolutions were passed in successive Legislatures looking to the organization of a State university. One of the plans proposed at this time is remarkable as an indication of what higher education in California did not suffer from its friends.

As recounted by Professor William Carey Jones, in his "History of the University of California," "Rev. Samuel B. Bell, representing Alameda and Santa Clara counties, had meanwhile introduced an extraordinary bill into the Senate 'for organizing the University of the State of California under the name of the Regents of the University of the State of California.' * * * The bill was introduced on March 23, 1858, went through the usual course, was at one time laid on the table, was then called up through the urgency of Mr. Bell, and on April 16 passed the Senate. It was then sent to the Assembly, where it was referred to the Committee on Education. The report of this committee was one of crushing destruction to the project. The proposition of the bill was to establish a body of regents, with various salaried officers appointed by them, including a chancellor, vice-chancellor, treasurer, and secretary; to unite under this board all the colleges then established and thereafter to be established in the State, with whatsoever faculties they might have, and wheresoever situated; and to distribute among these scattered institutions the funds that were designed for the university. The committee declared that 'such a heterogeneous combination for a university' would be 'impolitic, impracticable, and not the institution contemplated by the Act of Congress.' "

In 1858 the Legislature ordered the sale of the public lands and directed that the proceeds be held by the Treasurer of the State as a special fund to be devoted to the uses of the "seminary." But notwithstanding the official urgings of Superintendents of Public Instruction and of legislators, plans and resolutions in these years still came to nothing.

Clearly, the great difficulty in the way of establishing a university was the inadequacy of the funds at hand. With the income assured, a very small college might have been maintained, or perhaps a polytechnic school; but the men who were earnest for the university looked for something better than this. Hence the great stimulus to effort that came with the passage of the Morrill Act in 1862. In pursuance of this Act, the United States granted to California one hundred and fifty thousand acres for the endowment of a college which should have for its main object the teaching of agriculture and mechanics. Here at last seemed an adequate provision for the technical branch of a university. With this assured, the State might now devote its original funds to the maintenance of other faculties. And thus the question, so anxiously debated in former years, whether the State should divert its small funds to academic education or to technical training seemed answered even beyond the hopes of those years, by the possibility of combining both functions in one university.

Consequently, in 1863, a commission was appointed to report a plan for the founding of a "seminary of learning." The commission's report was decisive in favor of a single institution, but to the chagrin of the advocates of academic education, it recommended that the proposed institution should, for the time being, be simply a polytechnic school.

Largely pursuant of this report, the Legislature of 1866 passed an act to establish an Agricultural, Mining and Mechanical Arts College. A board of directors was appointed, to serve for two years, which was to effect plans for the new institution. Fortunately for the State, however, before active operations were begun, Governor Low, in reconsid-

UNIVERSITY OF CALIFORNIA—TABLE No. 5 A.

Summary of Degrees Conferred in the Academic Colleges of the University of California, 1869-1906.

NOTE.—The upper figures on the left in each group refer to men, the lower figures in the right side are women. Abbreviations: Ag., Agriculture; C. E., Civil Engineering; Chem., Chemistry; Com., Commerce; L., Letters; Mec., Mechanic Arts; Min., Mining; N. S., Natural Sciences; P. S., Social Sciences.

	1869-1879		1880-1889		1890-1899		1900-1906		Totals 1869-1906	
A.B.	179 222	401	174 181	355	214 175	389	567 578	1,145	2,580 1,890	4,290
M.A.	1 1	2	3 3	6	4 4	8	14 14	28	22 22	44
Ph.B.	1 1	2	Not regularly conferred since 1895				1 1	2	3 3	6
B.L.	139 139	278	178 144	322	176 166	342	224 224	448	717 673	1,390
M.L.	1 1	2	2 3	5	1 1	2	2 2	4	6 7	13
Ag.	1 1	2	2 3	5	11 6	17	12 8	20	26 18	44
Mec.	22 1	23	19 1	20	23 1	24	24 1	25	88 4	92
Min.	8 0	8	12 0	12	8 0	8	8 0	8	36 0	36
B.S. C.E.	17 1	18	12 0	12	22 0	22	22 0	22	73 1	74
Chem.	15 6	21	14 2	16	9 1	10	13 4	17	51 13	64
Com. (since 1899)	6 0	6	12 1	13	12 0	12	40 1	41	70 2	72
N.S.	13 26	39	16 20	36	13 14	27	42 100	142	134 160	294
M.S.	4 2	6	5 3	8	7 0	7	16 5	21	32 10	42
C.E.	0 0	0	0 0	0	0 0	0	0 0	0	1 0	1
Ph.D.	5 0	5	4 0	4	4 0	4	13 0	13	30 3	33
LL.D. (Honorary)	0 0	0	0 0	0	0 0	0	0 0	0	4 0	4
Sc.D. (Honorary)	0 0	0	0 0	0	0 0	0	0 0	0	2 0	2
Totals	179 222	401	174 181	355	214 175	389	567 578	1,145	2,580 1,890	4,290

* Does not include December graduates.

ering the whole matter, detected the unwisdom of diverting all the State moneys for higher learning to a purely technical training, and in his address of December 2, 1867, urged a more far-sighted policy.

But it is difficult to say what would have been the fate of the higher institution had there not occurred at this time an act remarkable for its generosity and its fine public spirit. At a meeting of the board of trustees of the College of California, of Oakland, on October 9, 1867, it was resolved that all the lands and buildings of the college be offered as a gift to the State, on the sole condition that the State permanently maintain in its proposed university a college of letters. It was further resolved, in pursuance of this, that the College of California should disincorporate as soon as the State should accept its offer and make provision for the continuance of a college of classical learning. Here was the third great good fortune of the State—greater and more touching than the others, in that it represented the deliberate sacrifice of a body of public-spirited men. For the College of California was no weakling product, glad to make itself over into something stronger and richer. Founded in 1853 by a high-minded minister of New England, Henry Durant, it had grown from a struggling private school into a college of recognized worth and academic dignity. It was religious in its character, but non-sectarian; in fact, its inception had been in the ideal of Henry Durant to establish on the new western coast a college that should be Christian in a more fundamental sense than the ordinary sectarian seminaries. Under the efficient administration of its founder, it had come to hold in California a place of leading influence among Protestant institutions. Hence it was a matter of no small sacrifice when it magnanimously withdrew from its field of earned success in order that the State might have no rival in its high effort.

This generous action of the College of California solved the problem that was being so anxiously debated. Through the coöperative effort, now, of the board of directors of the proposed College of Agriculture, Mines and Mechanical Arts, and the board of trustees of California College, a system of university organization that made provision both for the technical education required by the Morrill Act, and the classical training called for by the conditions of the gift of California College, was devised. Governor Haight, in his inaugural address, recommended the passage of a law establishing the university. A bill to "create and organize the University of California" was introduced on March 5, 1868, by Hon. John W. Dwinelle. On March 21 it passed both houses of the Legislature, and on March 23 was signed by Governor Haight. Thus was the period of tentative planning at an end. The university was now virtually an accomplished fact.

"A State University is hereby created," reads the first section of the charter, "pursuant to the requirements of Section 4, Article IX, of the Constitution of the State of California; and in order to devote to the largest purpose of education the benefaction made to the State of California" by the Morrill Act of 1862. "The said university shall be called the University of California, and shall be located on the grounds heretofore donated to the State" by the College of California. * * * "The university shall have for its design to provide instruction and complete education in all the departments of science, literature, art, industrial and professional pursuits, and general education, and also

special courses of instruction for the professions of agriculture, the mechanic arts, mining, military science, civil engineering, law, medicine, and commerce." Thus did the State assure its youth not only an adequate training in preparation for material activities, but also a real cultivation of character.

In accordance with its charter, drawn up almost entirely by Hon. John W. Dwinelle, the government of the university was vested in a board of regents, an academic senate, and the separate faculties. The board of regents was to consist of ex officio members, viz., the Governor of the State, the Lieutenant-Governor, the Speaker of the Assembly, the State Superintendent of Public Instruction, the President of the State Agricultural Society, the President of the Mechanics' Institute of San Francisco, and the President of the University; eight members appointed by the Governor, and eight honorary members elected by the appointed and ex officio members. By a later provision, all the positions on the board, with the exception of those officially held, became appointive. The following provision was expressly made in the charter: "No sectarian, political, or partisan test shall ever be allowed or exercised in the appointment of regents, or in the election of professors, teachers, or other officers of the university, or in the admission of students thereto, or for any purpose whatsoever. Nor at any time shall the majority of the board of regents be of any one religious sect, or of no religious sect; and persons of every religious denomination, or of no religious denomination, shall be equally eligible to all offices, appointments, and scholarships." Regents were to hold their office for a term of sixteen years. The members first appointed were to be classified by lot, so that one member should go out of office at the end of every successive two years. By this important plan, whereby the board changed its membership gradually, and whereby each term of office covered a number of gubernatorial administrations, as well as by the special provision already noted with regard to sectarian influence, the board of regents was secured against the pressure of both political and theological considerations. Unlike many provisions of this kind, this one has been eminently successful in its operation, for it is a recognized fact that the board of regents, as it has gradually changed its complexion with the years, has never in any sense been subjected to illegitimate pressure.

The original constitution of the University provided for four classes of colleges: (1) College of Arts, including agriculture, mechanics, mines, and civil engineering; (2) a College of Letters, or classical course; (3) professional colleges, including medicine and law; (4) other colleges incorporated into or affiliated with the University.

On September 23, 1869, the new university opened its doors. They were the doors, to be sure, of the College of California, in Oakland, for there had not yet been time to plan and bring to completion the buildings of the new institution; but those doors were opened now, not under private endowment, but under the auspices of the State. The University began its work humbly, indeed, with a class of forty students and a teaching force of ten members. Yet there was power in this simple beginning, for the University had in three of its teachers, at least, men who were to prove of inestimable worth to its future life—Henry Durant, the first President of the University; John Le Conte, professor of physics and later President of the University, and Martin Kellogg.

professor in the College of California, professor in the University of California, many times chairman of its faculties, and later President of the University. The last of these has only just passed away, in ripe old age and the honor of approved scholarship.

The instruction begun in the College of California buildings in 1869 was continued there until the summer of 1873. On July 16, 1873, the commencement exercises of the first class to graduate—a class of twelve—were held in Berkeley, and the University then made formal entrance upon its new home.

The University was from 1870 to 1872 under the presidency of Henry Durant. Upon his resignation, Professor Daniel Coit Gilman accepted the call to the position. President Gilman remained with the University until 1875, when the fascinating offer extended to him by the incipient Johns Hopkins University successfully tempted him from the western coast. The executive office was then filled by Professor John Le Conte.

In the first two years of the University's existence, two important steps were taken that have not since been retraced. In 1869 all admission and tuition fees were abolished, and in 1870 the University was opened to women on terms of complete equality with men. The latter provision was made part of the State Constitution of 1879, where it was expressly stated that no person should "be debarred admission to any of the collegiate departments of the University on account of sex."

President Le Conte resigned his office in 1881 and was succeeded by William T. Reid. The latter held office until 1885, when he was succeeded by Professor Edward S. Holden. The new president was to fill the vacancy only until the completion of the Lick Observatory, when he was to assume the position of its director. Upon the completion of the Observatory in 1888, Hon. Horace Davis was elected to the presidency, remaining in office until 1890. Upon his resignation, the office was for some years unfilled, Professor Martin Kellogg meanwhile performing its duties as chairman of the faculties. On January 24, 1893, Professor Kellogg was elected to the presidency, administering his office with efficiency until 1899. With the resignation of President Kellogg and the election of his honored successor, President Benjamin Ide Wheeler, we are brought to the present, and may now retrace our steps for a consideration of some of the determining events in the life of the University during the years recounted.

Between 1869 and 1903, the growth of the University was nothing less than marvelous. Beginning with a total registration of 24, and graduating a first class of 12, the University has grown in numbers, until in 1903 the official registration showed a total of 2,669 students enrolled in the academic colleges alone; while in the University, inclusive of the affiliated Colleges of Law, Medicine, Pharmacy, and Art, and the Lick Observatory, there was a total of 3,275. The instructing force has increased from 10 in 1869 to a total in the academic colleges of 246 in 1903, and in the whole University of 434. From a first graduating class of 12, the University has grown until, in 1902, it graduated a senior class of 280 in the academic colleges, and in the whole University a class of 417.

But this remarkable growth would hardly have been possible had not the State in 1887 generously placed at the disposal of the University a

permanent income from the State moneys. In 1887, the Vrooman Act, introduced into the State Senate by Hon. Henry Vrooman, and into the Assembly by Hon. C. A. Alexander, provided that the University should receive annually the proceeds of a tax of one cent upon every one hundred dollars of taxable property in the State. Hardly could a law more vital to the University have been enacted, for by placing the University's support upon a constitutional and not a legislative basis, it permanently freed the institution from the dangers of political variation.

Thus with an assured income, and with the pledge given by the State in its Constitution of 1879 that the maintenance of the University should be perpetual, the University of California was able, for a time at least, to free itself of the more distressing material anxieties and to address itself to its essential business of providing a culture and a training that should be adequate.

But a great difficulty lay in its pathway in the early years—a difficulty that for some time threatened to bring all its efforts to naught. To educate, it must have students, and to be a university, it must have students trained up to matriculation standards of a university. The success of the University, then, was one with the success of the high schools of the State. It may be imagined, therefore, how severe was the blow to the University when, by the Constitution of 1879, all State aid was withdrawn from the high schools and all the State's moneys for common schools were diverted to the schools of elementary grade. For a time it seemed as though the University must go under for lack of proper material. But after a period of dark uncertainty, the communities throughout the State bestirred themselves to a manful local support of high schools. Thus was this really grave danger averted.

But a second danger lay in the complete separation of high schools and University. The high schools pursued their work as best they knew how, with no indication as to the University's standards; the University pursued its work irrespective of the kind of training given in the high schools. The result was inevitable friction and loss of energy on both sides. It was soon realized by the University that if it was to be successful, there must be a unified high school system in the State that should join properly with the system of higher training. Hence the University set to work to evolve a plan whereby secondary and higher education might be brought into more harmonious conjunction.

The result was the system, since then become permanent, of accrediting high schools. Before this plan was adopted students were admitted to the University only upon examination. It was now agreed that students who should graduate from high schools approved by the University, and who should have, in addition to their diploma, a recommendation of their principal, showing their work to have been of superior character, might enter the University without examination. The effect of the accrediting system upon the education of the State has been of the very best. In order to determine the character of the various high schools, the University found it necessary to send men of its faculties to examine the work done. This at once brought about intercourse between the two systems of education; the high schools learned the requirements of the University; the University became aware of the needs and the obstacles of the high schools. The result was an increas-

ingly greater unifying of the whole system of secondary and higher education throughout the State. And the effect has at the present penetrated even to the grammar schools, so that the next years bid fair to see the triple system of education in California, with all its past waste and friction, rationally and uniformly organized. That the accrediting work has met with real success may be seen from the fact that from three accredited high schools in 1884, the list has grown until, according to the last report (1903), the accredited schools of the State now number 118.

The years that we have recorded witnessed many important acquisitions by the University. The Colleges of Law, Pharmacy, Dentistry, and Medicine were established in San Francisco and affiliated with the State institution. The munificent bequest of $700,000 made by James Lick, in 1876, for the founding and equipment of an astronomical observatory, gave the first great impetus to the adequate support of scientific work in California. In 1872, Mr. Edward Tompkins, by a grant of land in Oakland, established the first endowed chair in the University, the Agassiz Professorship of Oriental Languages and Literature. In 1878, Mr. J. K. P. Harmon responded to a much felt want by building and equipping a students' gymnasium on the campus. The nucleus of one of the most important of all the University's funds, the library fund, was established by Michael Reese; while the founding of an art gallery was due to the generous gift of Henry D. Bacon. In 1881, Mr. D. O. Mills, by a gift of $75,000, established the second endowed chair in the University, the Mills Professorship of Intellectual and Moral Philosophy and Civil Polity. This endowment has proved of inestimable worth to the higher life of the University. In 1893, Mr. Edward Searles transferred to the University the land and buildings in San Francisco now known as the Mark Hopkins Institute of Art "for the exclusive uses and purposes of instruction and illustration of the fine arts, music, and literature." In 1898, Miss Cora Jane Flood made over to the board of regents the Flood mansion, near Menlo Park, together with certain lands and shares.

In 1891, Mrs. Phœbe A. Hearst laid the foundations of a scholarship system in the University. In a letter to the board of regents, of the date September 28, 1891, she expressed her aims as follows: "It is my intention to contribute annually to the funds of the University of California a sum sufficient to support eight three-hundred-dollar scholarships for worthy young women. * * * I bind myself to pay this sum during my lifetime, and I have provided for a perpetual fund after my death. The qualifications entitling students to the scholarships shall be noble character and high aims, it being understood that without the assistance here given, the university course would in each case be impossible. * * * The award shall be made by a vote of the faculty, but I do not wish any scholarship to be given as a prize for honors in entrance examinations."

Six years later, when the doubling of the University's income was assured by the State Legislature, the University appropriated $3,500 "to be distributed equally among the eight congressional districts of the State, for the purpose of aiding poor and deserving students to attend the State University." These scholarships were to be known as the "State of California Scholarships"; they were not to exceed twenty-

STRAWBERRY CREEK, ON UNIVERSITY GROUNDS.

eight in number, and were to yield to each holder $125 per annum. Immediately this appropriation was made, Mr. Levi Strauss of San Francisco generously offered to duplicate it, the scholarships to be of exactly the same character with regard to income and award as those provided by the State.

In addition to these sixty-two scholarships, single scholarships have been established by various persons and institutions. In 1899, Mrs. Cornelius B. Houghton, in memory of her husband, made provision for an annual scholarship. The San Francisco Girls' High School, the Haywards, the San José, and the Los Angeles High Schools have maintained scholarship funds which they apportion to the meriting members of their schools. Besides these, scholarships are awarded out of the William and Alice Hinckley fund and the Joseph Bonnheim memorial fund. For the encouragement of graduate work, the University awards the Le Conte Memorial Fellowship, established by the Alumni Association, in memory of Professors John and Joseph Le Conte, three University fellowships at the Lick Observatory, two Whiting Traveling Fellowships, maintained out of a bequest of $20,000 made by the will of Harold Whiting, formerly associate professor of physics in the University, two Emanu-El Fellowships in Semitic languages, established by the Congregation Emanu-El of San Francisco; the Harvard Club scholarship, and the Yale Alumni Fellowship, founded and maintained by graduates of these universities. In addition, the University has two loan funds, the Frank J. Walton Memorial Loan Fund, established by the Class of 1883, and the loan fund of the Class of 1886.

We have already mentioned the State's grant to the University in 1887 of an income of one cent on every one hundred dollars of taxable property. For a few years the funds thus accruing were, economically administered, adequate to the needs of the University. But then came a period of unprecedented growth. Within five years—from 1891 to 1896—the enrollment of the University increased by a full threefold, while the funds at its disposal remained practically unaltered. The institution was in direst straits, not only because it had no means to augment its teaching force sufficiently to meet the larger needs, but also because it was unable even to provide room for the ever-increasing numbers.

Determined action was necessary. In a report to the board of regents in May, 1896, the Ways and Means Committee, consisting of Regents Reinstein, Black, and Rodgers, made a statement of the University's distress that became a basis for an appeal to the State Legislature.

> The provision made by the State of California for the constantly increasing wants of the State University is embodied in the act of the Legislature of 1887, and consists of a tax of one tenth of a mill on the dollar.
>
> At that time the number of students in the University was 288, while now it is 1,336 (at Berkeley). The provision then made by the Legislature was considered just sufficient for the then needs of the University, and it was anticipated that the taxable wealth of the State would increase in just about the proportion that the University would grow, and thus meet and provide for the constantly increasing demands of the University through the enlargement of the number of its students. This expectation seemed then to be well founded, and was justified by the growth of the University for the succeeding four years, but since the year 1891 the number of students at the University, which was then 456, has increased to a degree as remarkable as it is gratifying.
>
> Within the last four years the number of students at the State University has trebled, and is at the present writing 1,336, while in the entire University, including its affiliated colleges, the number is 2,047, and the indications are that the next Freshman class will outnumber all before it. The income of the University from

this act, however, so far from doubling, has increased only an insignificant amount within the last five years, and is actually less in 1895 than in 1894 or 1893.

Under these circumstances alone, it is but reasonable to believe that the next Legislature will take such steps as will be commensurate with the power, the pride, and the dignity of a sovereign State, when it realizes that the provision for the support of the University made by the Legislature in 1887 is entirely inadequate to the present quadrupled demands of the University, and still less adequate to maintain that constantly increasing prosperity of the State's highest institution of learning, which is a just source of State pride and an essential condition of State dignity and prosperity.

In response to this statement of needs a bill was, in 1897, introduced by Hon. F. S. Stratton into the Senate, and into the Assembly by Hon. Howard E. Wright, which provided that the University's income should be increased to two cents on every hundred dollars of taxable property. To the great relief of all friends of the University, the bill passed both houses without opposition and was signed by Governor Budd on February 27, 1897. Thus did the State a second time prove her deep and abiding interest in the welfare of her University.

To one who has visited the University, nothing can be more strikingly obvious than the painful contrast between the character of its site and its buildings. Situated on the foothills of the Contra Costa Range, and looking westward out through the Golden Gate, its natural placing is almost unmatched. Yet with this remarkable beauty of location is coupled an equally remarkable ugliness of makeshift buildings. The pressing difficulty that the University faced in the years of its rapid growth was that of finding, not the best room, but any kind of room for its students; and in attempting to solve this difficulty with an inadequate income, the only resort was in hastily constructed temporary buildings. The sole virtue of these was their cheapness and their capacity. As a result, the succeeding years saw the beautiful campus crowded more and more with homely buildings, scattered about with hardly a thought of present or future plan. That this haphazard construction was unwise and ruinous to the beauties of the University's site was felt by many, but two men especially put their convictions into serious and concerted effort. Mr. B. R. Maybeck, instructor in architectural drawing in the University, had long felt the need of a permanent plan for the placing and style of the University buildings, and he was active in making known his views. They were heartily seconded by Mr. J. B. Reinstein, a regent of the University, so heartily that as a result of a communication addressed to the board of regents on April 29, 1896, the board voted that there should be prepared a program "for a permanent and comprehensive plan, to be open to general competition, for a system of buildings to be erected upon the grounds of the University of California in Berkeley." Before the resolve of the board had been put into effective operation, however, it came to the notice of Mrs. Phœbe A. Hearst, who had herself long been deeply concerned in the architectural beautifying of the University. Mrs. Hearst, with a generosity, spontaneous and admirable, wrote at once to the board of regents, expressing her great interest in the project and her desire to contribute wholly the expenses of the proposed competition. Needless to say that the offer so totally unsolicited and so magnificent beyond expectations was gratefully accepted by the board.

It is impossible in this cursory history of the University to give more than the barest outline of the course of the "Phœbe A. Hearst Archi-

tectural Competition." That contest of the world's known artists has become so internationally famous that it hardly needs more than mention to have its whole story recalled. In preparing for the competition, the two men who had been most zealous in the cause were commissioned to canvass the leading architects of the world to the end of enlisting adequate interest and of preparing a just plan of contest. After careful consideration a program was drawn up, providing for two competitions, a preliminary one, to be held in Antwerp, and a final one, to be held in San Francisco. The committee of award was to consist of Messrs. R. Norman Shaw, J. L. Pascal, Paul Wollot, Walter Cook, and J. B. Reinstein. Owing to the illness of Mr. Shaw, Mr. John Belcher was substituted in his place. The preliminary competition opened on January 15, 1898, and closed July 1, 1898. Of the one hundred and five plans received, eleven were selected by the jury to stand for the final contest. As a help toward the further preparation of their plans, the winners in the first award were invited, at the expense of Mrs. Hearst, to visit the University town. The second contest, in San Francisco, on September 7, 1899, resulted in the following award: first prize, Mons. E. Benard, Paris; second prize, Messrs. Howells, Stokes and Hornbostel, New York; third prize, Messrs. D. Despradelle and Stephen Codman, Boston; fourth prize, Messrs. Howard and Cauldwell, New York; fifth prize, Messrs. Lord, Hewlett and Hull, New York.

This is but a bare statement of the essential facts of the contest. But if one would know the reality of the Phœbe A. Hearst architectural competition one must read into the skeletal bones of these facts, all the loyal enthusiasm, the ardor of hope, the fire of great purpose awakened by the project. If the plan had meant merely an embellishing of the outer life of the University, it would have signified little indeed; but ostensibly a remedy for the outward, it called forth in the State and in the University the firm determination that the inner life should not be unworthy.

Yet it must not be thought that it was ever in the intent of the donor that the plan should serve merely as a means to outer embellishment. Mrs. Hearst has long felt that beauty serves an essential need of the soul, that in placing beautiful objects before the maturing student one helps to develop pure, strong character as surely as with the spoken truth. Mrs. Hearst has for some years been proving the strength of her convictions by providing the students of the University with best examples of the fine arts. With art collections and concerts of a superior kind, she has opened the eyes and the ears of the student to beauty. The work has been none the less great that the refining and purifying influence has been all unconscious.

In this recital of the University's growth, we have made no reference to its attempts to fulfill one of the main purposes of its establishment. The grant of the Morrill Act of 1862 was made, as we have seen, on condition that an institution be founded that should have primarily in view a training in agriculture. The University has attempted to meet this requirement to the full; and there can be no doubt that as the years have passed its efforts have been successful. Up to 1891, work in agriculture was entirely within the University confines. In that year, however, was inaugurated the custom of holding Farmers' Institutes throughout the State. By this means the University came into touch

with the farmers of California, with a success that is indicated by the yearly increase in the number of institutes held. In 1897, so important had this work beyond the University's doors become, that a new department was created, a Department of University Extension in Agriculture. By means of the information disseminated at these institutes, as well as through its frequent bulletins, the Agricultural Department of the University has enabled the State not only to increase in very large degree its present agricultural earnings, but also to make sure the permanent tertility of its soils.

On July 18, 1899, the University entered upon a new stage of its development in the election to its presidency of Professor Benjamin Ide Wheeler, of Cornell University. The four years and a half of President Wheeler's administration have witnessed a remarkable growth in the University's prosperity, both in the inner life that is more properly its concern and in the material resources that must ever be indispensable. Those years have proved most especially the deep love of Californians, rich and poor alike, for their University. In 1900-1902, the gifts to the University, from private sources alone, amounted to about $900,000. As we are writing this, word has just been received of a bequest of some $500,000 to $600,000 by one of San Francisco's leading business men, Mr. Charles F. Doe, for the building of a new University library. But it is not in the public-spirited wealthy alone that the University is beginning to find her strength. In countless ways donations are being made by those of more modest income, from the five dollars that comes as an annual gift from an anonymous alumnus, or the scholarship money returned by another graduate, to the more substantial gifts for library or departments. It is of deepest significance that California's alumni feel the impulse to give of their own, for in this abiding love for their University lies the real promise of her permanent and increasing greatness.

It will be fitting at this point to mention some of the leading benefactions to the University in the years of President Wheeler's administration. Only a bare handful may be recounted in this brief history. Significant of his concern for the higher life of the University was the gift, in 1902, by Mr. D. O. Mills, of $50,000 for the furtherance of the work of the Department of Philosophy. This was in addition to Mr. Mills's original gift of $75,000 for the establishment of a chair of philosophy. The endowment of another important chair—in classics—is due to the generosity of Mrs. Jane K. Sather, who has given $75,000 for that purpose. Mrs. Sather has also made over to the University real property of great value for the establishment and support of a law library, and has, in addition, made important gifts of books. The construction of a Physiology building, at an expense of $25,000, has been made possible by the generosity of Mr. Rudolph Spreckels, and its thorough equipment by Dr. Max Herzstein's gift of $8,000. A most important addition to the library of political science, finance, and history has been made by Claus Spreckels's gift of $11,675.82. Mr. H. Weinstock has presented the University with $5,000 as a foundation fund for the "Barbara Weinstock Lectures on the Morals of Trade." One of the sorest needs of the University has been met in the construction of a great open-air theater, built on the model of the Greek Theater, and

seating some seven thousand people. Mr. W. R. Hearst contributed the $40,000 necessary for the building of this unique structure. An assemblage place, not only capacious but singularly beautiful, it will prove a source of stimulation in ways that have heretofore been beyond the University's power to realize.

When we attempt to recount Mrs. Hearst's gifts to the University the pen fails. They are numerous beyond any possible listing, because many of them are known only to Mrs. Hearst herself. We have already recounted Mrs. Hearst's assumption of the expenses of the architectural competition. Mrs. Hearst is now erecting, in accordance with the accepted plans, a mining building as a memorial to her husband, Senator Hearst. The minimum cost of this building will be half a million of dollars. She is maintaining the department of anthropology, expending $10,000 a year for five years for excavations and research in Egypt, $3,500 a year for five years for the like work in South America, $10,000 a year for two years for research in Greece, and $6,000 a year for anthropological work in California, Mexico, and New Mexico. The maintenance of this department alone for 1900-1902 was at a cost of $103,046. She has contributed over $6,000 for a museum building, has presented the University with Hearst Hall, valued at $50,000, has supported the Hearst Domestic Industries at an annual cost of over $15,000, has provided over $27,000 for the equipment of the medical department, $13,000 for a mining laboratory, and $8,400 for the equipment of gymnasiums. The President's biennial report of 1898-1900 gives the following figures for the two years recorded: "The total of gifts for which figures have been given in the foregoing list (exclusive of the support of archæological expeditions of about $30,000 a year) is $271,566.65. This amount is, however, far less than what Mrs. Hearst has actually expended for the benefit, direct or indirect, of the University."

But to write a list of Mrs. Hearst's gifts to the University is all unsatisfactory, for the real significance of them lies not so much in their magnificence, if one may use the word, but rather in the fine insight of the giver, the sympathetic touch with younger lives, the personal delight in discovering the deepest and the most real needs. And though great beyond reckoning has been the tale of her free-will offerings, greater, after all, and more lasting in worth for the University has been the fine idealism of her character, her unswerving faith in the beautiful and the true and the good, and her high efforts toward their realization in her chosen children.

And yet, even with this generosity of her friends, the University has not been wholly free of embarrassment. Almost, it might be said, it has suffered from too much good-will. In 1898-99, the total registration of students, including those in the professional colleges, was 2,439; in 1902-03 it had leaped to 3,275. In 1898-99 the total registration in the academic colleges alone was 1,717; in 1902-03 it had increased by more than one half, being in that year 2,669. Meanwhile the two-cent tax, which, in 1899, had been just sufficient to meet the University's needs, yielded an income that increased only very slightly from year to year. Between 1899-1900 and 1901-1902 it grew by but 4.4 per cent. "Had it not been for the generous aid of its private friends," writes President Wheeler in his report of 1900-02, "the University would have been crippled and well-nigh helpless." But though there may be

STRAWBERRY CREEK, ON UNIVERSITY GROUNDS.

As in its examination of schools and its Farmers' Institutes, the University aimed to come into closer touch with the people of the State, so, in 1902, it prepared to meet the more popular needs for instruction and stimulus by the organization of a Department of University Extension. This department, planned largely on the lines of the English system, has established centers of extension work throughout the State, which are visited by a corps of lecturers whose duties lie entirely or mainly in the extension field. The success in this work, too, promises permanence.

Important for the professional teaching of the University has been the wise reorganization of the Medical Department. In the past years, the Medical College was perforce compelled to resort almost entirely to practicing physicians of San Francisco for its instructing body. While the efforts of the men who, in the midst of their medical labors, gave of their time and strength to the college, may not be too highly praised, it is nevertheless obvious that, excellent as these efforts were, they could not be made adequate for a medical school of highest scholarly rank. President Wheeler, in his first report to the board of regents, called attention to the need for better organization of the Medical Department, and it is due to his efforts that the succeeding years have witnessed an increasingly better equipment and disposition of the medical work.

Graduate work in the University has in the last few years been organized with growing success. Not only has the number of graduate students increased with great rapidity, as indicated by an enrollment of 244 students in 1903 as against 64 in 1893, but the work has come to be of a more distinctly advanced kind than in the years of its inception. The departments now recognize a radical difference in aim and methods between undergraduate and advanced work, so that the higher degrees now signify not a mere prolonging of the period of residence, but the successful completion of work of a thoroughly graduate nature.

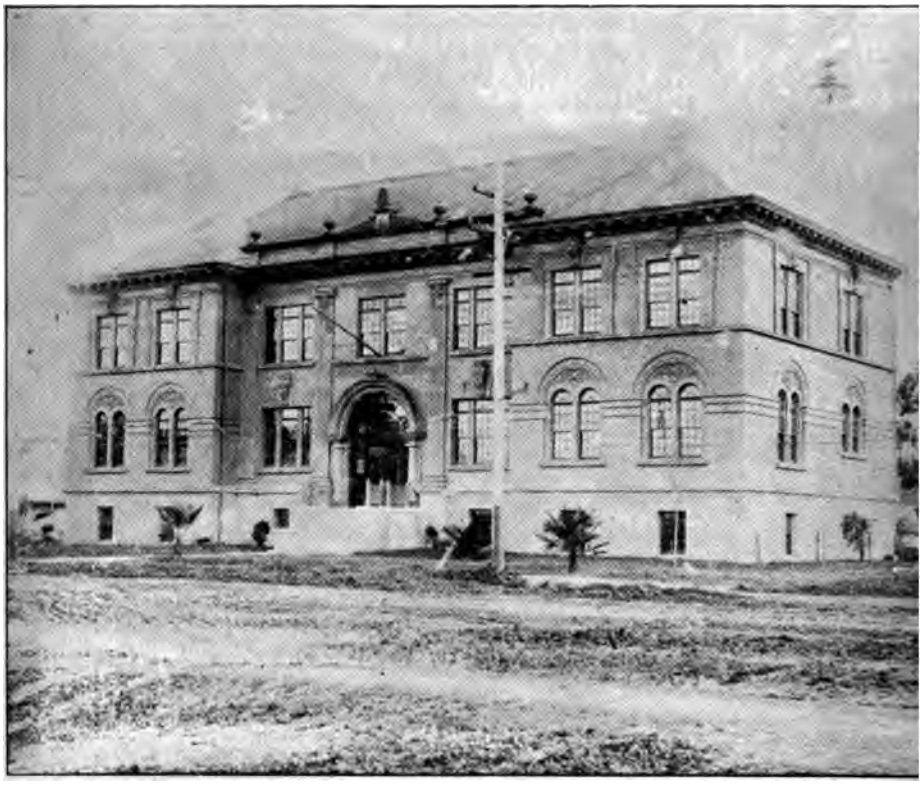
A factor of great importance in the University's life is its function as a training school for prospective teachers of the State. By a law of the State, boards of education and examination have authority to issue certificates of high school grade, without examination, to graduates of the University who are recommended by the faculty. The operation of this law has been of utmost benefit to California, in that it has encouraged the University to send forth trained students into the high school field. The result has been not only a bettering of the tone and scholarly character of secondary teaching, but also a securer and more sympathetic drawing together of the University and high school forces. The coming years bid fair to witness the long-desired establishment of a Teachers' College.

The University has established a regular series of publications in each of the following departments: Botany, Geology, Education, Zoölogy, Græco-Roman Archæology, Egyptian Archæology, American Archæology and Ethnology, Anthropology, Physiology, Pathology, Astronomy, and Agriculture. It also issues, every quarter, the "University Chronicle," which is an official record of University life.

The University now comprises the following colleges and departments: College of Letters, College of Social Sciences, College of Natural Sciences, College of Commerce, College of Agriculture, College of

Mechanics, College of Mining, College of Civil Engineering, College of Chemistry, Lick Astronomical Department, Mark Hopkins Institute of Art, Hastings College of Law, Medical Department, Postgraduate Medical Department, Dental Department, California College of Pharmacy.

In this very brief account of the University's life, it has clearly been impossible to trace out, with the explicit detail that their importance warrants, the factors and forces that have made the institution what it is. But bare as the outlines are, they may, if nothing more, serve to suggest the peculiar conditions amid which a State University is placed, the difficulties of its development, the boundless scope of its opportunities. The University of California has not made its way without struggles peculiar to an institution that finds its support in the suffrage of the people. It is of the deepest import to the cause of public higher education that it has won its support without truckling, that it has never lowered its ideals to temporary public wishes, but has held high the standard of pure scholarship. The University of California is to-day without doubt a permanent factor in the life of the State, and as such, the outgoing of its influence may not be measured. With its sister university, it stands for the development of the very highest in the character of California. It may be extravagant to predict, as some are pleased to do, that in California a new note in world thought and feeling is to be sounded—a new literature, art, philosophy. Yet it is hardly extravagant to feel convinced that California is immense in possibilities of culture, that her birth to a richer life is even now but just accomplished, while the greatness of her days may scarcely be foretold. In the midst of this youthful promise, the two vigorous universities stand as nurturers of the best. If the life of the past is promise of the future, California is assuredly secure in the high character of her university guides.



SEQUOIA UNION HIGH SCHOOL REDWOOD CITY, SAN MATEO COUNTY.

LELAND STANFORD JUNIOR UNIVERSITY.

By DR. O. L. ELLIOTT, Registrar.

The years 1904-1906 have been marked (1) by the death of Mrs. Stanford, (2) by a change in the internal administration of the University through a new organization of the Faculty, and (3) by a steady growth and strengthening of the work of instruction in various directions.

The death of Mrs. Stanford occurred February 28, 1905, after practically all she had planned for the University had been realized, or made clearly possible. By courage, devotion, and great personal sacrifice, the University was brought through a trying period of financial stress, and the great material plan, outlined at the very beginning, carried almost to completion. The property finally, as turned over to the University trustees from the Stanford estate, amounted to more than $20,000,000, which promises, under wise and careful management, a future income of more than a million dollars per year.

Opening with an attendance, in 1891-92, of 559 students, numbers increased rapidly until, in 1894-95, 1,100 was reached. Then followed a period of retrenchment and severe economy, due to financial stress. Numbers remained practically stationary until 1899-1900. Since that time there has been a steady growth, the number for 1905-06 being 1,786. After the finances of the University had been happily adjusted, the income was mortgaged for some years in the interest of completing the original building plans, and it was not until 1904-05 that additional moneys could be used for purposes of university instruction. In this year a moderate increase in salaries was made possible, and numerous instructors were added to the staff, mainly in the way of strengthening existing departments. Plans for enlargement and expansion, including the establishment of new professorships, have been temporarily checked by the earthquake of April, 1906, but the restoration of buildings destroyed or injured by the earthquake is being pushed with vigor, and by the first of September, 1907, the Quadrangles (excepting Memorial Church and the Arch) and the Chemistry building will have been completely restored. The Arch, the Church, the Gymnasium, and the Library can be rebuilt more leisurely without seriously retarding the internal development of the University. As a matter of fact, the feeling of confidence in the assured position and steady growth of the University was never so strong as now.

The reorganization of the Faculty as an administrative body is marked chiefly by the creation of the Advisory Board, the Executive Committee, and the Department Faculties. The Advisory Board is a body of nine men, elected by the Academic Council, to whom all matters concerning the relations of the President to the Board of Trustees are

submitted by the President. Neither the President nor the Board of Trustees is bound by any action of the Advisory Board. In practice, however, the President and the Advisory Board will naturally work together, and the President's proposals and recommendations to the Trustees will have, thereby, additional weight and importance.

The Academic Council, consisting of all professors, associate professors, and assistant professors of three years' standing, a body at present of some seventy-five members, has neither the time nor opportunity for adequately working out the various detailed matters of internal administration. Under the new Articles of Organization this task is intrusted to an Executive Committee consisting of three ex-officio members (President, Vice-President, and Registrar) and ten members elected by the Academic Council. The Executive Committee is intended to act for the Council in all routine matters, but all measures involving a change in University policy must be submitted to the Academic Council. The Council may also at any time, of its own motion, instruct or overrule the Executive Committee in all except certain minor details of administration. Both Advisory Board and Executive Committee have taken up their duties with vigor, and the effectiveness of the new arrangement is practically demonstrated.

The Department Faculty replaces the old Major Professor system so far as the management of departmental affairs is concerned. The Major Professor becomes executive head of the Department Faculty, but with no power of action in department matters except such as may be intrusted to him by the Department Faculty itself.

The entrance requirements of the University have been revised in minor details. Certain new subjects have been added, and the intent has been to include all subjects of disciplinary and training value, which may properly be included in the high school curriculum. The purpose of the University is to make it possible for the graduate of an approved and thoroughly strong four years' high school course to enter the University in undergraduate standing directly and without intermediate processes. Uncertainty as to actual conditions in preparatory schools, and the desirability of accrediting only work of real value, still make certain technical restrictions necessary. It is the policy of the University, however, to leave the determination and arrangement of the preparatory course of study to the high schools themselves, offering to them the benefit of its experience in the way of advice and counsel only. The list of entrance subjects accepted by the University numbers thirty-five, aggregating forty-seven and one-half units. Fifteen units, of which English composition only is prescribed, are necessary for full undergraduate standing.

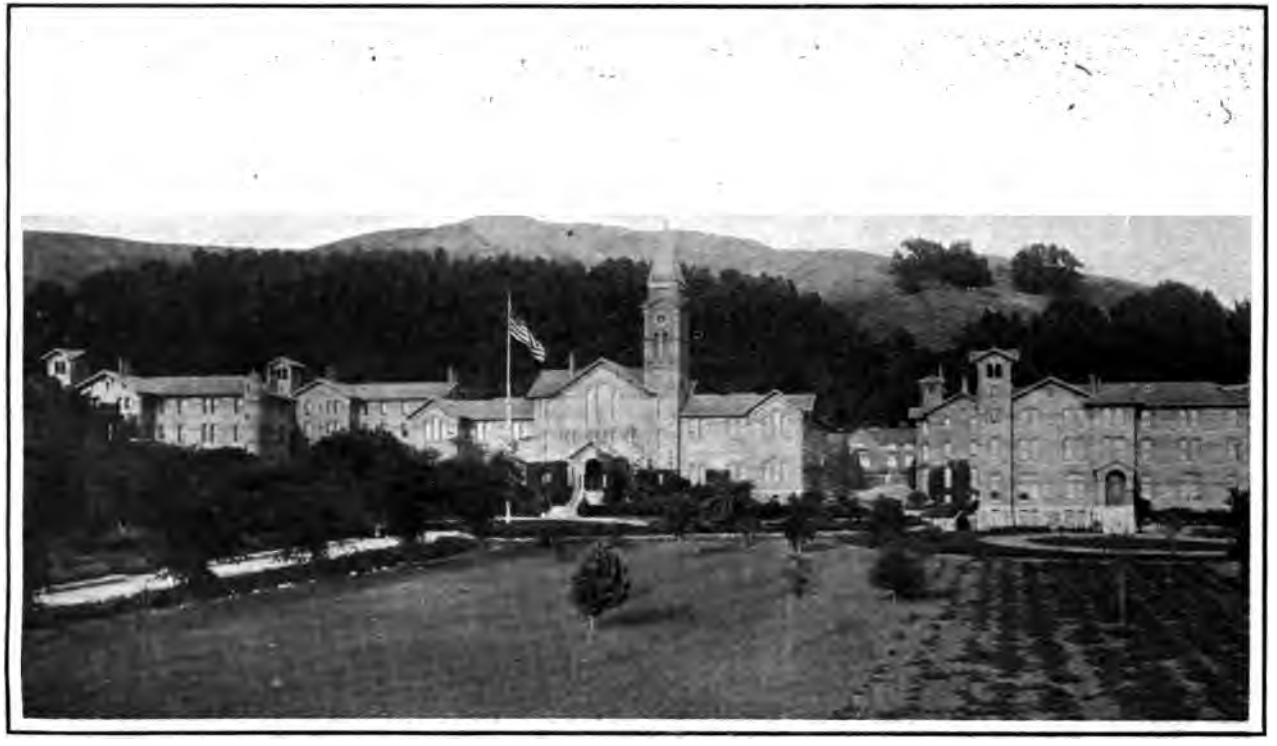
Some consideration has been given to the question of raising standards of admission by withholding acceptance of credentials from all who do not present a higher standard of excellence than has heretofore obtained, in character, maturity, seriousness of purpose, and scholarly attainment. This attempt is still in the experimental stage.

The problem of athletic sports has engaged the attention of Stanford as of so many universities during this period. The evils attending the chief intercollegiate sport, football, have become so pronounced that Stanford, acting with the State University of California, has decided to substitute for the American game, Rugby football. It is hoped that

many of the evils of the old game will be thus obviated. The value of athletic games in the university is unquestioned, and Stanford with all the other universities is interested in their rational development.

The work of the University is embraced in the following general departmental groupings: (1) the Ancient and Modern Languages; (2) the Natural Sciences; (3) the Mathematical Sciences; (4) Philosophy, Law, History and Political Science; (5) Engineering. Instruction is offered in all of these lines and departments to meet the needs of undergraduates. In most departments graduate work has been undertaken, but the number of graduate students is not large, and emphasis has not yet been put upon this side of the work. One hundred and twenty units of university work are required for graduation, which is the academic measure of a normal four years' course of study. No subjects are prescribed for graduation. The student, however, must elect some department, or division of a department, as a major subject. Upon this subject he must spend a fourth to a third of his time, the remainder of his course being made up on the student's own initiative, but subject to the advice and approval of the Major Department.

The President of the University since its organization is David Starr Jordan, LL.D.



INSTITUTION FOR THE DEAF AND THE BLIND, BERKELEY, CALIFORNIA

INSTITUTION FOR THE DEAF AND THE BLIND.

By WARREN WILKINSON, Principal.

The biennial period ending June 30, 1906, was one of great peace and prosperity in the history of the Institution until the morning of April 18, 1906, when an earthquake of unusual severity threw the whole household into great consternation, although the pupils and officers behaved with singular coolness and self-possession. For the three days after the shock, school was practically suspended, though a sort of class organization was kept up, but the sessions were held under the trees, and teachers and children were playmates rather than pedagogue and student. On Monday, the 23d, we had become so used to temblors that it was considered wise to resume work in a normal way, and from that time to the close of the term, June 12, there was no further interruption of studies, and the concert given by the blind pupils on the Friday evening preceding Commencement, and the graduating exercises at the close of school, June 12, were held in the chapel before a large audience of relatives and friends who came from far and near to witness the somewhat novel exhibition of methods and results of teaching the deaf and the blind.

The attendance of pupils for the last two years has been as follows:

On rolls June 30, 1904:			
Deaf boys	77		
Deaf girls	62	139	
Blind boys	42		
Blind girls	30	72	
			211
The admissions since the same date have been—			
Deaf boys	26		
Deaf girls	24	50	
Blind boys	10		
Blind girls	14	24	
			74
Total under instruction			285
There have been graduated, discharged, and died, as follows:			
Deaf boys	30		
Deaf girls	19		
Died	1	50	
Blind boys	16		
Blind girls	9		
Died	1	26	
Total deductions			76
On rolls June 30, 1906			209

The attendance during the biennial period is the largest in the history of the Institution, but the earthquake has undoubtedly caused many

people to leave the State, and our own school has suffered by the removal of a good many parents who have taken their children to former homes in other states or territories. There are, however, indications that newcomers will fill their places, and the accommodations of the Institution will be taxed to their utmost capacity during the current year.

The educational methods of the school have not been materially changed since our last report. Indeed, it is doubtful if any new method will ever be found of teaching the deaf or the blind. Equipments, environments, combinations, new applications of old truths will vary and improve, but success in solving the problem we all seek, namely, how best to ameliorate the handicap of deafness and blindness, will always depend for its solution upon the skill, the enthusiasm and resourcefulness of the teacher, and the patient persistence, energy, and aptitude of the pupil. No method will succeed in the hands of a dull teacher. Any method followed by a competent teacher will show good results, which goes to prove how much more important the man is than the method, whether it be the French, the German, or the Combined. The usage in the California Institution has been and is to employ all means of reaching and developing the mind, and to fit the pupil for intelligent citizenship and moral rectitude, and we have seen no reason to doubt the wisdom of this usage, when the axiom of "the greatest good to the greatest number" is taken into consideration.

At the last session of the Legislature, the following Act was passed, much to the gratification of all friends of the Institution:

The people of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. The Political Code of the State of California is hereby amended by adding thereto a new section, to be numbered and known as Section 2236, to read as follows:

2236. The Institution for the Deaf and Dumb and the Blind, located in Berkeley, Alameda County, and heretofore known as the Deaf, Dumb and Blind Asylum, shall hereafter be named and known and designated as the "California Institution for the Deaf and the Blind."

SEC. 2. Section 2237 of the Political Code is hereby amended to read as follows:

2237. The Institution for the Deaf and the Blind, located at Berkeley, Alameda County, is a part of the school system of the State, except that it shall derive no revenue from the public school fund, and has for its object the education of the deaf and the blind who, by reason of their infirmity, can not be taught in the public schools. It shall be known and designated as the California Institution for the Deaf and the Blind.

The purpose of the Act above quoted was to give a definite status to the Institution as a part of the educational system of the State, to relieve the school of a misnomer, and to disabuse the public mind, if possible, of the idea that the Institution is an asylum, a name which is as misleading and inappropriate as to call the university an asylum, or a normal school a "retreat." Deaf or blind boys or girls come to Berkeley from all parts of the State to obtain an education, and for no other purpose. The parents are not paupers, the pupils are not vicious, not insane, not criminal, nor diseased. They spend their summer vacation at home, and leave the Institution permanently at nineteen years of age to take their places in the ranks of productive industry with their fellows, and it is nothing but the truth to say that they hold their own in the fierce struggle for existence with the best of them. To call a school of this kind an asylum is an injustice to the pupils, and an

DURHAM HALL—INSTITUTION FOR THE DEAF AND THE BLIND.

offense to their parents and relatives, and for this reason we congratulate the friends of the Institution, and thank the members of the last Legislature, for the change of name and this definition of the purpose and function of the Institution.

RECEIPTS AND EXPENDITURES.

Receipts.

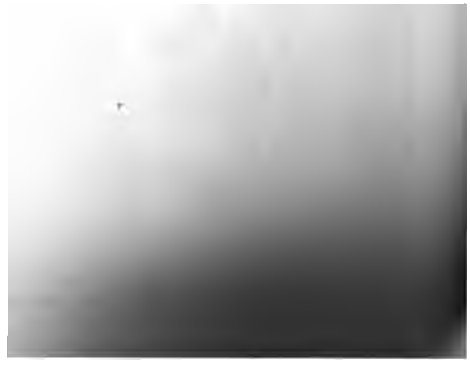
Appropriation for salaries and wages	$91,200 00	
Appropriation for support	40,960 00	
		$132,160 00

Expenditures.

Salaries and wages	$90,168 29	
Supplies	40,303 26	
		130,471 55
Balance		$1,688 45

CONTINGENT FUND.

Balance on hand June 30, 1904	$4,279 12
Receipts	13,497 19
	$17,776 31
Expenditures	13,509 82
Balance on hand June 30, 1906	$4,266 49



STATE PUBLICATION OF TEXT-BOOKS.

AN HISTORICAL REVIEW.

By ROBERT FURLONG,
Secretary of State Text-Book Committee.

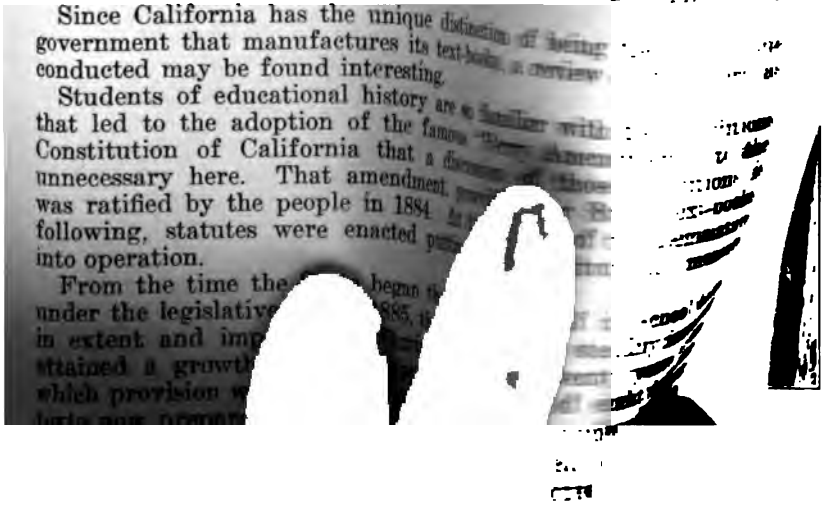
The preparation and distribution of text-books in California has become a work of significance in the school administration of the State. The various duties necessary to the proper performance of this work require nearly as much time and effort as all other duties combined in the office of Superintendent of Public Instruction.

Nor is the Department of Public Instruction the only department of State government whose energies are taxed in preparing school [illegible]. The work adds to the duties of several officials, extending [illegible] chief executive, the Governor of the State, who is Chairman [illegible] Text-Book Committee and ex-officio President of the State [illegible] Education.

The Superintendent of State Printing has, in addition [illegible] force in his office, a small army of men and women engaged [illegible] mechanical work of printing and binding text-books [illegible].

The various agencies engaged in the distribution of the [illegible] schools may also well be included when noting the [illegible] the conduct of this extensive public enterprise.

A work of such magnitude connected with the public [illegible] recognized as an important factor in the State's education[illegible] is no less a factor in the economic policy of the State [illegible] business affairs.



Since California has the unique distinction of being [illegible] government that manufactures its text-books, a review [illegible] conducted may be found interesting.

Students of educational history are [illegible] familiar with [illegible] that led to the adoption of the famous [illegible] Constitution of California that a discussion [illegible] unnecessary here. That amendment, [illegible] was ratified by the people in 1884. [illegible] following, statutes were enacted [illegible] into operation.

From the time the [illegible] began [illegible] under the legislative [illegible] 1885, [illegible] in extent and importance [illegible] attained a growth [illegible] which provision [illegible]

It evidently was the thought of the first promoters of State publication that fewer books than were then in use in the schools would satisfy the needs of pupils and that this would be a saving in cost to school patrons. That this idea obtained at that time is shown in the provisions of the legislative act of 1885, authorizing the preparation and distribution of a State series consisting of three readers, one speller, one arithmetic, one grammar, one history of the United States, and one geography.

It was soon discovered that the limited number of text-books prescribed by statute was inadequate. No provision had been made for texts on several other subjects usually taught in elementary schools; furthermore, the text adapted to the grammar school was found too difficult in the lower or primary grades. A single book would not suffice for all grades, in most of the studies in the elementary course.

To meet these difficulties the Legislature of 1887 passed an act providing for a primary or beginners' text-book in each of the studies, arithmetic, language, and geography, also one book in physiology and hygiene. These books, like those named in the act of 1885, were to be prepared by or under the supervision of the State Board of Education, and b· ·anufactured at the State Printing Office.

An elementary book in "the civil government of the United States, with a special analysis of the government of the State of California," was provided for by an act of the Legislature of 1889. The book that was prepared under this act and copyrighted in 1891 has survived until the present day. Whether this has been due to the lengthy and comprehensive title given to the book in the act providing for its publication, or to the exhaustive "special analysis of the government of the State of California," which the act contemplated should be made in the text, may never become known.

In the history of California's text-books this work on civil government occupies a unique place. The substitutions, revisions, and various mutations that, during twenty years, have marked the processes of evolution in State texts, have eliminated all of the early books save this one. It might be claimed that this is a simple example of the "survival of the fittest," but there are some class-room teachers who would dispute the claim. However, it is the one "old Argonaut" of pioneer text-book days that has never been superseded, although now in practical retirement. Its companion texts of that early period are strewn along the highway of educational progress, mute though eloquent witnesses that California has passed over the road.

Notwithstanding this widening of the original scope of State publication, both in multiplying the number of books and in providing for additional studies, the text-book product of the State's industry still failed to meet the expectations of the people. The teaching force of the State murmured its dissatisfaction with the contents of the prescribed books. Crudities, misstatements of fact, and a general want of attractiveness in the texts made them difficult for teachers and uninteresting to pupils. Evidences of a lack of skill in text-book making appeared in every book that so far had been prepared under the system. Quality had not been considered a factor, for most of the texts were neither pedagogical nor modern. Quantity, at first restricted, was later enlarged when the number and kinds of books were increased, which fact added

STATE PRINTING OFFICE, SACRAMENTO.

materially to the cost for school patrons. This latter result was especially disappointing to the promoters of State publication who had promised great reductions in cost of books. Upon the whole, the method of providing children's school books cheaply, to which the people had given emphatic approval by engrafting it on the Constitution of the State, had in practice proved quite unsatisfactory.

After four years without text-book legislation, again the law-making body of the State, in 1893, was appealed to for relief. Either a revision of the books for the purpose of improving them, or the abandonment of State publication altogether, was urged by the teachers of the State almost unanimously. The Legislature of 1893 passed an act authorizing a revision of the grammar, advanced arithmetic, history, and readers. also authorizing the compilation of a primary history. Under the direction of the State Board of Education, and under the immediate supervision of an editorial staff, the books named for revision were in due time "revised" or practically supplanted by new texts. There were three readers at the time, which number the act provided might be increased to five, at the discretion of the State Board of Education. The number of readers was increased to four. These books were named and known as the Revised First, Revised Second, Revised Third, and Revised Fourth Readers of the California State Series.

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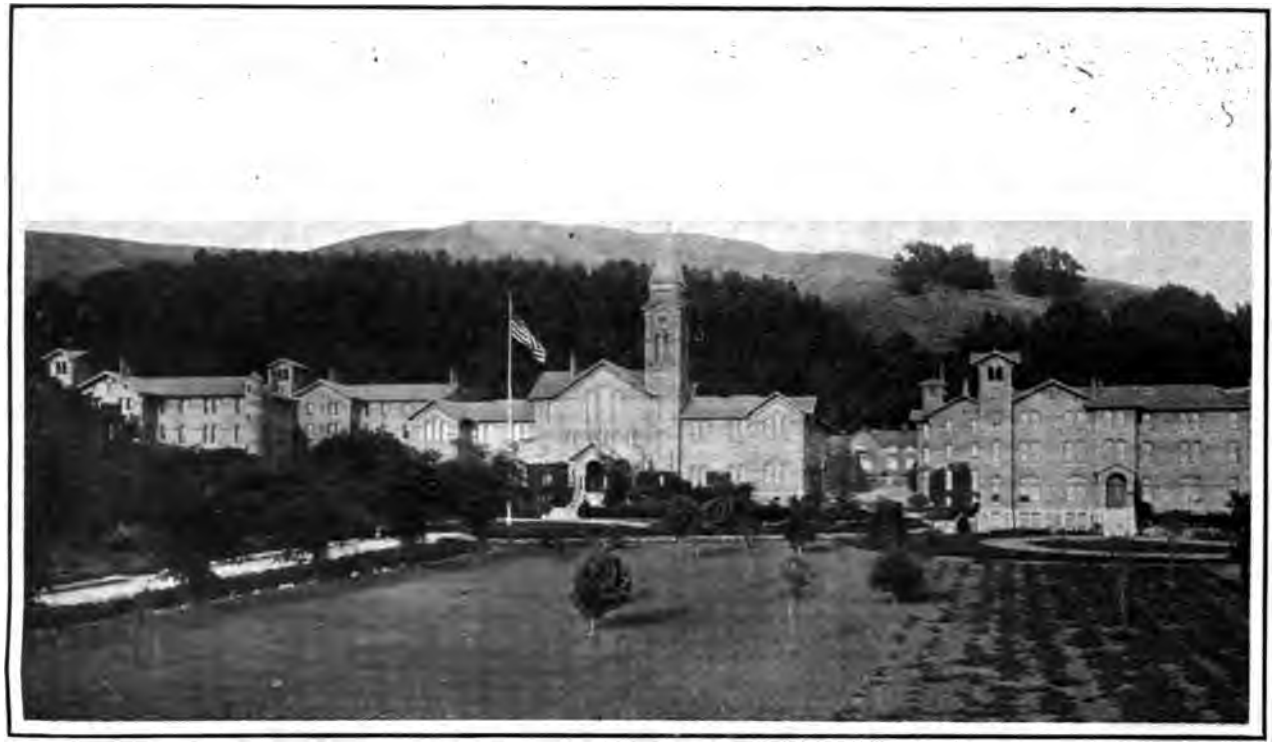
While the revised books were an improvement on those that had preceded them in use, they failed to satisfy the requirements of the schools. Dissatisfaction was heard from every class-room. So general did fault-finding become that it found open expression in resolutions adopted at nearly every institute of teachers and at every convention of superintendents held in the State. It was repeatedly shown by competent judges that in a comparison with texts used in several other states, the California books suffered. They were found to be inferior in both plan and content, while the mechanical work on them reflected no credit on the book-maker's art.

So far the texts had been compiled by California writers, who, as authors, were previously unknown. These writers employed for the work were doubtless "well-qualified persons," since the statute directed they should be so, but evidently their high qualifications extended in other directions than in the writing of text-books adapted to California schools. The finished products of their skill were not of the "first order of excellence," which standard the State had established for its school books in the act providing for their preparation. Teachers demanded text-books in keeping with the State's progressive school system. They found their work in the class-rooms hampered because of the inferior texts they were compelled by law to use. The effects of this condition in the schools, serious as they were, would doubtless have been even more disastrous had it not been for a saving provision in the law permitting the use of other books to supplement the State texts. Boards of education had authority to adopt lists of books for supplementary purposes. The names of the best elementary text-books published in the United States soon appeared in school manuals, associated with the prescribed State publications. It was permissible under the law to

DURHAM HALL—INSTITUTION FOR THE DEAF AND THE BLIND.



INSTITUTION FOR THE DEAF AND THE BLIND, BERKELEY, CALIFORNIA

INSTITUTION FOR THE DEAF AND THE BLIND.

By WARREN WILKINSON, Principal.

The biennial period ending June 30, 1906, was one of great peace and prosperity in the history of the Institution until the morning of April 18, 1906, when an earthquake of unusual severity threw the whole household into great consternation, although the pupils and officers behaved with singular coolness and self-possession. For the three days after the shock, school was practically suspended, though a sort of class organization was kept up, but the sessions were held under the trees, and teachers and children were playmates rather than pedagogue and student. On Monday, the 23d, we had become so used to temblors that it was considered wise to resume work in a normal way, and from that time to the close of the term, June 12, there was no further interruption of studies, and the concert given by the blind pupils on the Friday evening preceding Commencement, and the graduating exercises at the close of school, June 12, were held in the chapel before a large audience of relatives and friends who came from far and near to witness the somewhat novel exhibition of methods and results of teaching the deaf and the blind.

The attendance of pupils for the last two years has been as follows:

On rolls June 30, 1904:		
Deaf boys	77	
Deaf girls	62—139	
Blind boys	42	
Blind girls	30— 72	
		211
The admissions since the same date have been—		
Deaf boys	26	
Deaf girls	24— 50	
Blind boys	10	
Blind girls	14— 24	
		74
Total under instruction		285
There have been graduated, discharged, and died, as follows:		
Deaf boys	30	
Deaf girls	19	
Died	1— 50	
Blind boys	16	
Blind girls	9	
Died	1— 26	
Total deductions		76
On rolls June 30, 1906		209

The attendance during the biennial period is the largest in the history of the Institution, but the earthquake has undoubtedly caused many

people to leave the State, and our own school has suffered by the removal of a good many parents who have taken their children to former homes in other states or territories. There are, however, indications that newcomers will fill their places, and the accommodations of the Institution will be taxed to their utmost capacity during the current year.

The educational methods of the school have not been materially changed since our last report. Indeed, it is doubtful if any new method will ever be found of teaching the deaf or the blind. Equipments, environments, combinations, new applications of old truths will vary and improve, but success in solving the problem we all seek, namely, how best to ameliorate the handicap of deafness and blindness, will always depend for its solution upon the skill, the enthusiasm and resourcefulness of the teacher, and the patient persistence, energy, and aptitude of the pupil. No method will succeed in the hands of a dull teacher. Any method followed by a competent teacher will show good results, which goes to prove how much more important the man is than the method, whether it be the French, the German, or the Combined. The usage in the California Institution has been and is to employ all means of reaching and developing the mind, and to fit the pupil for intelligent citizenship and moral rectitude, and we have seen no reason to doubt the wisdom of this usage, when the axiom of "the greatest good to the greatest number" is taken into consideration.

At the last session of the Legislature, the following Act was passed, much to the gratification of all friends of the Institution:

The people of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. The Political Code of the State of California is hereby amended by adding thereto a new section, to be numbered and known as Section 2236, to read as follows:

2236. The Institution for the Deaf and Dumb and the Blind, located in Berkeley, Alameda County, and heretofore known as the Deaf, Dumb and Blind Asylum, shall hereafter be named and known and designated as the "California Institution for the Deaf and the Blind."

SEC. 2. Section 2237 of the Political Code is hereby amended to read as follows:

2237. The Institution for the Deaf and the Blind, located at Berkeley, Alameda County, is a part of the school system of the State, except that it shall derive no revenue from the public school fund, and has for its object the education of the deaf and the blind who, by reason of their infirmity, can not be taught in the public schools. It shall be known and designated as the California Institution for the Deaf and the Blind.

The purpose of the Act above quoted was to give a definite status to the Institution as a part of the educational system of the State, to relieve the school of a misnomer, and to disabuse the public mind, if possible, of the idea that the Institution is an asylum, a name which is as misleading and inappropriate as to call the university an asylum, or a normal school a "retreat." Deaf or blind boys or girls come to Berkeley from all parts of the State to obtain an education, and for no other purpose. The parents are not paupers, the pupils are not vicious, not insane, not criminal, nor diseased. They spend their summer vacation at home, and leave the Institution permanently at nineteen years of age to take their places in the ranks of productive industry with their fellows, and it is nothing but the truth to say that they hold their own in the fierce struggle for existence with the best of them. To call a school of this kind an asylum is an injustice to the pupils, and an

DURHAM HALL—INSTITUTION FOR THE DEAF AND THE BLIND.

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Receipts.

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AN HISTORICAL REVIEW.

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Secretary of State Text-Book Committee.

The preparation and distribution of text-books in California has become a work of significance in the school administration of the State. The various duties necessary to the proper performance of this work require nearly as much time and effort as all other duties combined in the office of Superintendent of Public Instruction.

Nor is the Department of Public Instruction the only department of State government whose energies are taxed in preparing school books. The work adds to the duties of several officials, extending even to the chief executive, the Governor of the State, who is Chairman of the Text-Book Committee and ex-officio President of the State Board of Education.

The Superintendent of State Printing has, in addition to a clerical force in his office, a small army of men and women engaged in the mechanical work of printing and binding text-books of the State series.

The various agencies engaged in the distribution of the books to the schools may also well be included when noting the forces employed in the conduct of this extensive public enterprise.

A work of such magnitude connected with the public schools must be recognized as an important factor in the State's educational system. It is no less a factor in the economic policy of the State as relates to its business affairs.

Since California has the unique distinction of being the only State government that manufactures its text-books, a review of the work as conducted may be found interesting.

Students of educational history are so familiar with the conditions that led to the adoption of the famous "Perry Amendment" to the Constitution of California that a discussion of those conditions is unnecessary here. That amendment, providing for State text-books, was ratified by the people in 1884. At the session of the Legislature following, statutes were enacted putting this constitutional measure into operation.

From the time the State began the manufacture of its school books under the legislative act of 1885, that enterprise has steadily increased in extent and importance. During a period of twenty years it has attained a growth of large proportions. Instead of eight books for which provision was originally made by statute, the number of different texts now prepared by the State is fifteen, and instead of editions of a few thousands of the earlier books, editions now often reach 100,000 copies of a single book.

It evidently was the thought of the first promoters of State publication that fewer books than were then in use in the schools would satisfy the needs of pupils and that this would be a saving in cost to school patrons. That this idea obtained at that time is shown in the provisions of the legislative act of 1885, authorizing the preparation and distribution of a State series consisting of three readers, one speller, one arithmetic, one grammar, one history of the United States, and one geography.

It was soon discovered that the limited number of text-books prescribed by statute was inadequate. No provision had been made for texts on several other subjects usually taught in elementary schools; furthermore, the text adapted to the grammar school was found too difficult in the lower or primary grades. A single book would not suffice for all grades, in most of the studies in the elementary course.

To meet these difficulties the Legislature of 1887 passed an act providing for a primary or beginners' text-book in each of the studies, arithmetic, language, and geography, also one book in physiology and hygiene. These books, like those named in the act of 1885, were to be prepared by or under the supervision of the State Board of Education, and b· ·anufactured at the State Printing Office.

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Notwithstanding this widening of the original scope of State publication, both in multiplying the number of books and in providing for additional studies, the text-book product of the State's industry still failed to meet the expectations of the people. The teaching force of the State murmured its dissatisfaction with the contents of the prescribed books. Crudities, misstatements of fact, and a general want of attractiveness in the texts made them difficult for teachers and uninteresting to pupils. Evidences of a lack of skill in text-book making appeared in every book that so far had been prepared under the system. Quality had not been considered a factor, for most of the texts were neither pedagogical nor modern. Quantity, at first restricted, was later enlarged when the number and kinds of books were increased, which fact added

STATE PRINTING OFFICE, SACRAMENTO.

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After four years without text-book legislation, again the law-making body of the State, in 1893, was appealed to for relief. Either a revision of the books for the purpose of improving them, or the abandonment of State publication altogether, was urged by the teachers of the State almost unanimously. The Legislature of 1893 passed an act authorizing a revision of the grammar, advanced arithmetic, history, and readers, also authorizing the compilation of a primary history. Under the direction of the State Board of Education, and under the immediate supervision of an editorial staff, the books named for revision were in due time "revised" or practically supplanted by new texts. There were three readers at the time, which number the act provided might be increased to five, at the discretion of the State Board of Education. The number of readers was increased to four. These books were named and known as the Revised First, Revised Second, Revised Third, and Revised Fourth Readers of the California State Series.

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many desirable features that should be incorporated in the school so far as our means will permit.

In planning the building the first consideration is the floor arrangement, which should be well studied so as to get the most convenience within the least possible space. In studying the floor plan, the class-room necessarily receives our first attention. It should be made the size required to accommodate the number of pupils who are to occupy it, allowing not less than 15 square feet of floor space to each pupil. Where the light is from the left side only, the room should not exceed 25 feet in width and not over 32 feet in length. Too great a length should be avoided. In France and Germany the maximum length of a school-room is 30 feet. This is the distance to which the average voice will carry with ease, and the pupils in the back part of the room can easily read the writing on the front blackboard.

In connection with every school building provision should be made

W. H. Weeks, Architect.

DESIGN FOR A TWO-ROOM BUILDING.

for a small room for the use of the teacher. This, of course, will incur a little additional expense, but it is money well expended, as this is a very essential part of the building.

Rooms must be provided for the hanging of cloaks and hats. Making use of the halls and class-rooms for this purpose is not only unsightly, but unsanitary. The cloak-room should not be less than 5 feet wide and should have outside light and ventilation. Numbered coat and hat hooks should be provided, placed at alternate heights of 4 feet and 5 feet for the accommodation of the different sized pupils; also shelves for lunch baskets and rubbers. It has been demonstrated that this room when placed in direct connection with the class-room is more convenient, and under closer supervision of the teacher. In this arrangement also the ventilation in the winter months is more easily provided for.

A small heated and ventilated locker should also be provided in the

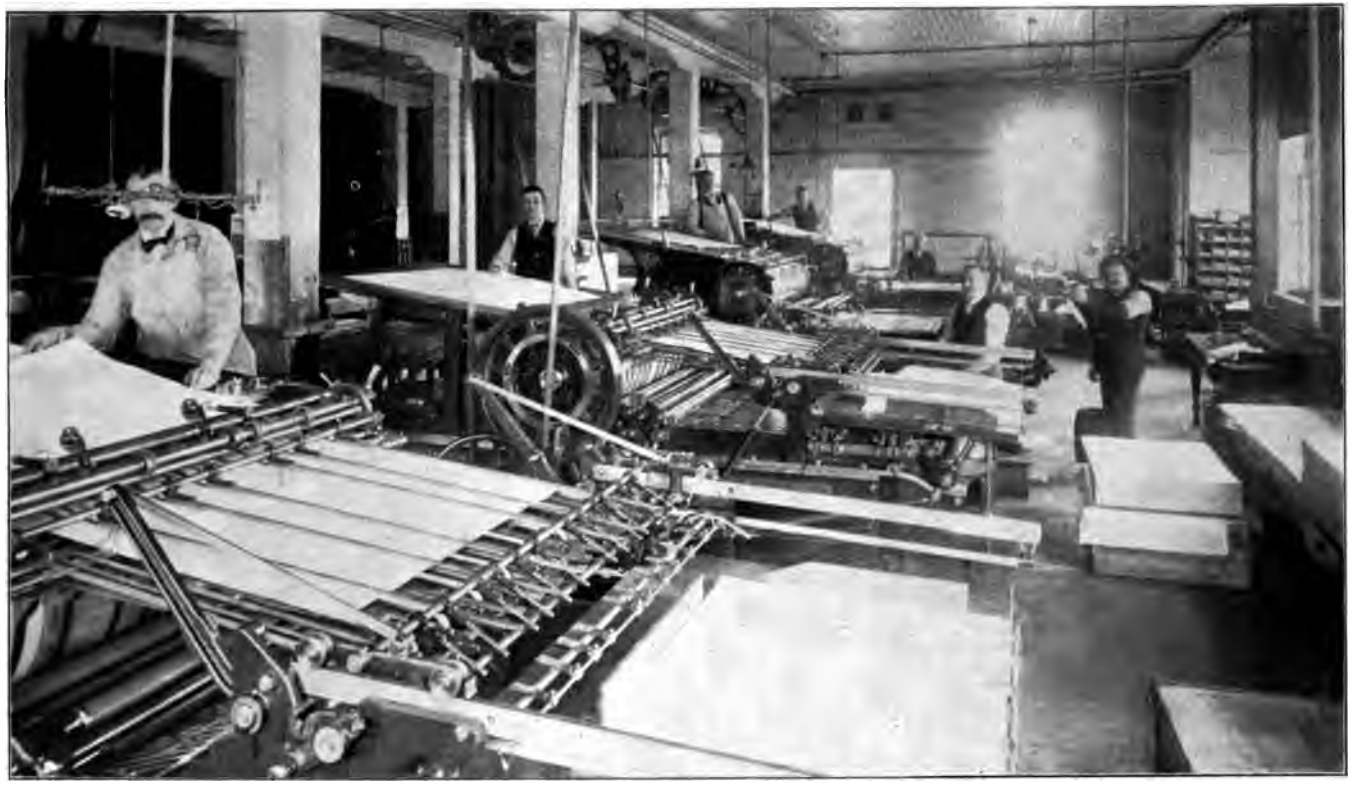
purchase supplemental books with certain funds of a district or city. When purchased they belonged to the school library, to be used for class-room purposes. Pupils were required to buy only the State book in any study, as the supplementary books, enough for class use, were furnished at expense of a district. In a measure, this method of purchase meant free text-books, since the supplementary books furnished schools often outnumbered the State books owned by the pupils.

The use of supplementary books became general—became the *fashion* of the schools. Enterprising agents of Eastern publishers gave the movement additional stimulus until it grew to huge proportions. The library shelves of many elementary schools bent under the weight of supplementary text-books bearing the imprint of Eastern publishers. The outlay for this being a heavy burden on the taxpayers, public investigations were made. School patrons who in their youth had been taught a course based wholly upon an elementary spelling book by one Dr. Noah Webster, could not understand or appreciate the necessity for six or more readers, histories, etc., for every pupil in the grades, in addition to his regular State school books. However, no restrictions were placed on the practice, and the fashion increased in the schools. The array of supplemental books prescribed in many courses of study as aids to the teaching of the regular texts was startling and confusing. Bewildered pupils were unable to tell what studies they were pursuing, so indefinite were their efforts when scattered through a multitude of books. What at first was intended as a proper means to overcome the deficiencies of the State texts became, through excessive use, itself an obstacle to progress in the schools. Furthermore, it was officially asserted that the law relating to use of school text-books was being generally evaded, and in some instances openly violated.

Ten years of these vexatious conditions passed without change in the text-book laws. It was a decade of uncertainty as to progress in elementary education. From 1893 fo 1903 was perhaps the most critical period of any in the educational history of California. Before its close text-book agitation had reached such a tension as to seriously embarrass educational work. Relief had to be found for the schools, and speedily. It came in this way. A closer reading of the constitutional provision for State school books led to the conclusion that while the books must be manufactured within the State, the texts for the same may be taken from any source wherever obtainable.

The plan of leasing copyrights and plates of books used elsewhere, and of adapting the same for use in California books to be manufactured at the State Printing Office, was quickly accepted, as it promised better things. The State Board of Education at once entered upon negotiations for the lease of the McMaster's text in history and of a reading series. It was found, however, that new legislation was needed to carry out certain details of this scheme. The Legislature of 1903 enacted laws for putting this plan into operation; also made other changes in the plan of conducting text-book work.

From the beginning of State publication the responsibility of directing the preparation of texts was with the State Board of Education. It was a divided responsibility resting equally upon nine individuals whose places of residence were widely apart. The best results could not well be secured under such unfavorable conditions. The new statute



SECTIONAL VIEW OF PRESS-ROOM STATE PRINTING OFFICE, SACRAMENTO.

provided that the immediate supervision of the preparation of texts should be centered upon three members of the State Board of Education, viz., the Governor, Superintendent of Public Instruction, and one other member to be named by the Board, these three to constitute a State Text-Book Committee, whose duties were defined in the statute. Provision was also made for a secretary for the committee. The official acts of the committee were to be valid and binding on the State only after approval by the State Board of Education. Statutory powers, broad and liberal, were conferred upon the committee to enable it to secure the best approved texts, wherever obtainable.

Soon after the adoption of this broader basis for selecting material, the Text-Book Committee began the preparation of a new series of State school books. This was the beginning of a second era in the history of State publication. The teaching forces hailed with joy the prospect it presented to them of relief both from inferior home-made texts and from a conglomerate and confused mass of other texts, then used in the schools to overcome the deficiencies of the former. Publishers throughout the United States were invited to submit proposals for leasing to the State, for a term of years, certain copyrighted texts and plates for printing the same. The invitation did not at first meet with encouraging response from publishers. Never before in the history of their business had a proposition of this nature been made to them. California was introducing a novel and extraordinary feature into a business that since the days of William Caxton had followed well-defined lines. A State as a book publisher was a new factor, heretofore unknown, which would now have to be reckoned with in that business. It was an innovation that book publishers did not apparently care to encourage. The proposals to lease were at first few, with demand for high royalties for use of copyrights. It was embarrassing to the Text-Book Committee to make its first contract for a history at a royalty of 30 per cent of list price, to continue through a term of six years. Yet such were the best terms that could at the time be secured. Some books that had found favor in the schools as supplementary texts appealed strongly to the committee as containing material well adapted for a State series. The adoption of the text of McMaster's Grammar School History, of Tarr and McMurry's Elementary Geography, and of Cyr's Reading series, all texts previously tried in the schools and pronounced good, furnish evidence as to how the committee was directed in making these selections.

To make a critical review of the many sample text-books accompanying publishers' proposals requires not only expert knowledge of the subject considered, but much time also—more time than the members of the Text-Book Committee can give. From the beginning of the new system, critic-readers have been employed to make reviews of books in competition. This practice has greatly facilitated the work of the committee. These critic-readers have been chosen by the Text-Book Committee and other members of the State Board of Education. The number employed has varied from nine to sixteen, according to the importance and difficulty of the subject considered. A compensation not to exceed a total of $200 for any one text selected is allowed for such service, payable from a special appropriation made by the Legislature in 1903. It will be seen that the pay of critic-readers is small, when,

as was the case with the subjects language and grammar, over sixty text-books were reviewed, requiring weeks of time, for which expert service each reader was paid the amount of $25.

In nearly every instance the selection made by the committee has been of the text best approved by the critic-readers, although there is no rule directing such action. The committee members are the final judges of merit, and the responsibility rests upon them. Their action, when approved by the State Board of Education, is conclusive.

Although this new system of selecting texts has been in operation but little over three years, a nearly complete new State series of books has been prepared for the schools. Nine contracts, covering as many different texts comprised in fourteen books, have been made by the State. All but one of these contracts are for a term of four years. Provision is made in all of the contracts for changes in the texts and plates, without cost to the State, whenever during term of contract the Text-Book Committee and State Board of Education decide that such changes are necessary to bring books up to date, as with history and geography. The lessors of copyrights furnish reasonable bonds for the faithful performance of their agreement.

Royalties on copyrights were high at first, as we have already noted, but as the plan of leasing them has become better understood an eager competition has enabled the State to secure contracts for several of its best texts on a 20 per cent royalty for four years. So far only one text is a California production—the First Book in Arithmetic, contracted for on a royalty of 17½ per cent.

Mention has been made of the steady growth of the text-book enterprise since the State publication began. The highest figures were reached during the fiscal year last closed, when it was found that over half a million text-books had been the output of the State Printing Office for the twelve months preceding. The sales nearly equaled this enormous output during the same time. With three additional books in the list of publications, the output for the present year will reach far beyond the half-million mark. The sales of books for the month of August of present year aggregated in money, $77,492.53, being the highest for any one month since the beginning of State publication.

Since school text-books are sold at actual cost, these extensive sales yield no net revenue to the State. The cost of text-books to pupils averages less than the cost of what are practically the same books sold by Eastern publishers, the California retail price being nearly the same as the wholesale price in the East.

New and improved machinery has been recently installed in the bindery of the State Printing Office, increasing the facilities of that department for doing more and better work at a reduced cost. The State printing plant as a whole is large, well equipped, and at this time employs only skilled labor of a high standard in the book departments.

It will be understood that it has not been the purpose of this article to speak either for or against the State system of text-book publication, to note its advantages or its disadvantages, but rather to record its growth and development since it became a part of the law of the State.

NOTE.—For statistical tables showing price and sales of text-books, see pages 249-255.

RURAL SCHOOL BUILDINGS IN CALIFORNIA.

By W. H. WEEKS, Architect.

Copied from "The Architect and Engineer of California"

Planning a school building has come to be one of the most important and exacting problems of the district school trustee, yet not a few trustees appreciate the fact. As a result it is not uncommon to find a country school sadly lacking in such essential features as high-class

W. H. Weeks, Architect.

ONE-ROOM SCHOOL IN CLASSIC STYLE BUILT OF WOOD.

construction, lighting, heating, and sanitation. This, no doubt, is sometimes due to financial limitations, but more often it is due to a lack of knowledge of the accepted rules and principles of modern school sanitation and construction.

It is my privilege to point out some of the ways by which the country school can be made more sanitary, convenient, and artistic.

Before planning the building it is necessary to provide the site. This should be centrally located, on high ground, if possible, where good drainage is assured, and where the purest air can be obtained, always remembering that the locality admitting the east light into the classroom is the one above all others to be preferred in this climate.

In regard to the requirements of the model country school—and when I say requirements I have in mind the fact that where expense enters so largely into the problem it is impossible to have everything as we might wish. Still there are certain necessities that we can not overlook, and

many desirable features that should be incorporated in the school so far as our means will permit.

In planning the building the first consideration is the floor arrangement, which should be well studied so as to get the most convenience within the least possible space. In studying the floor plan, the class-room necessarily receives our first attention. It should be made the size required to accommodate the number of pupils who are to occupy it, allowing not less than 15 square feet of floor space to each pupil. Where the light is from the left side only, the room should not exceed 25 feet in width and not over 32 feet in length. Too great a length should be avoided. In France and Germany the maximum length of a school-room is 30 feet. This is the distance to which the average voice will carry with ease, and the pupils in the back part of the room can easily read the writing on the front blackboard.

In connection with every school building provision should be made

W. H. Weeks, Architect.

DESIGN FOR A TWO-ROOM BUILDING.

for a small room for the use of the teacher. This, of course, will incur a little additional expense, but it is money well expended, as this is a very essential part of the building.

Rooms must be provided for the hanging of cloaks and hats. Making use of the halls and class-rooms for this purpose is not only unsightly, but unsanitary. The cloak-room should not be less than 5 feet wide and should have outside light and ventilation. Numbered coat and hat hooks should be provided, placed at alternate heights of 4 feet and 5 feet for the accommodation of the different sized pupils; also shelves for lunch baskets and rubbers. It has been demonstrated that this room when placed in direct connection with the class-room is more convenient, and under closer supervision of the teacher. In this arrangement also the ventilation in the winter months is more easily provided for.

A small heated and ventilated locker should also be provided in the

cloak-room for drying damp clothing if the heater adjoins the cloak-room.

The halls should be of ample size, so that there will be no crowding of pupils.

All ceilings should be 12 feet 6 inches to 13 feet high.

The question of heating and ventilation is a very important one and should receive the closest attention from the school trustees. When we consider that all the best authorities on school architecture state that no less than 30 cubic feet of fresh air per minute should be furnished each pupil in a class-room, we realize more fully the conditions under which the children labor in all poorly ventilated schools. There are several dangerous elements in vitiated air, but the fact that children

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The elaborate heating and ventilating systems, such as are used to-day in the modern, up-to-date city school, where a blower is used in combination with air filters and automatic regulation of temperature, are very expensive. They cost too much to install and operate in a small country school where similar results can be obtained at a reasonable expense by the use of jacketed stoves or heaters in which fresh air is introduced through a conduit from the outside. In fact, the conduit should come from two sides of the building in order to get the best results. The conduit should be provided with dampers that can be easily operated from the school-room. The air should come up from under the heater and between the stove proper and the outside covering, entering the room from the top. The foul air is then taken out through a vent flue, through which the smoke pipe is carried. Since the cold air falls toward the floor, the outlet should be placed in the wall at the floor line. The pressure of the fresh heated air thrown up into the room from the stove jacket will force out the foul air through the vent below.

The vent flue, being heated by the small smoke pipe passing through, causes an upward draught that carries the foul air to the outside. A number of heaters are made for this purpose and can be purchased at a reasonable cost.

If the district is too poor to secure such a heater, then the stove can be encased with a metal jacket, providing for doors and other necessary openings and a fresh-air inlet below. This jacket can be made easily and will be a great improvement over the naked stove, which should never be used in the school-room.

In regard to blackboards, there is a strong prejudice in favor of slate, on account of its durability. When the very best quality of slate is secured there can be no question as to its merits. The initial expense is,

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VILLAGE SCHOOL IN DUTCH STYLE—BRICK VENEERED, WITH CONCRETE BLOCK TRIM.

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Hyloplate and other similar boards should be glued to a ½-inch board backing in order to get the best results. The Parshall green artificial slate has proved to be a very satisfactory board. It is really a slating which is applied either directly to the plastered wall, to heavy Manila paper glued to the wall, or to wooden boards. Much care must be taken, however, in preparing for this or any other artificial board of this class to see that the walls are properly seasoned and prepared before the preparation is applied, otherwise the board that ordinarily would prove good might prove unsatisfactory. A still cheaper form of blackboard is manufactured by the use of hard plaster and paint, but it is too easily damaged to be seriously considered.

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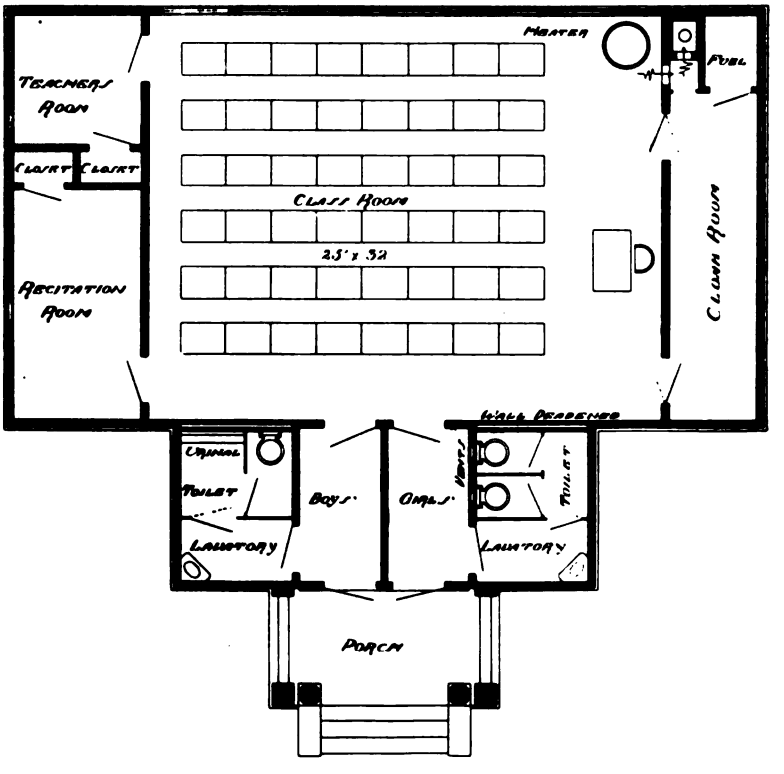
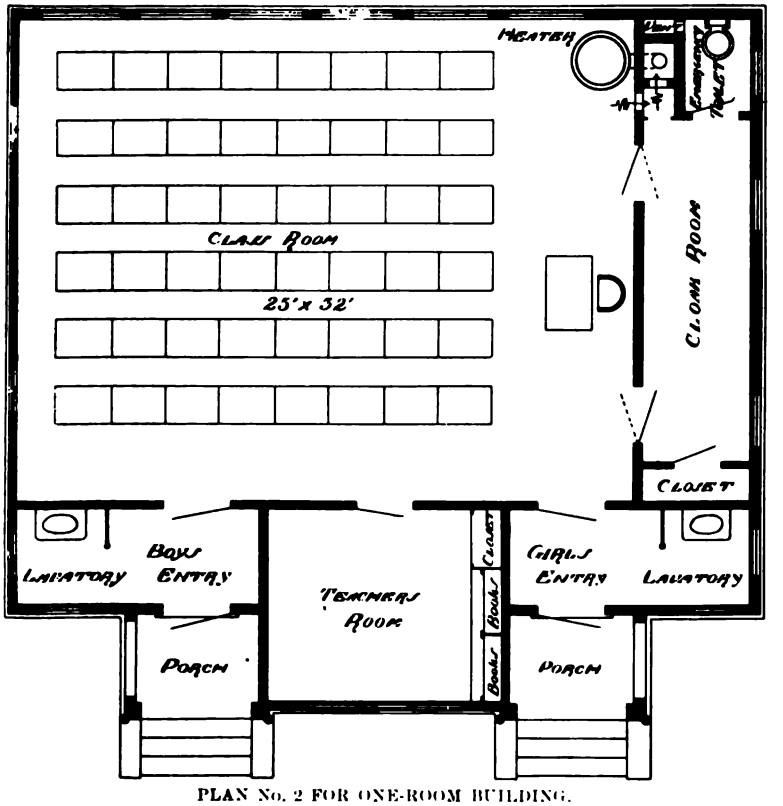
EXTERIOR OF PLAN No. 1.



PLAN No. 1 FOR ONE-ROOM BUILDING.

EXTERIOR OF PLAN No. 2.

W. H. Weeks, Architect.



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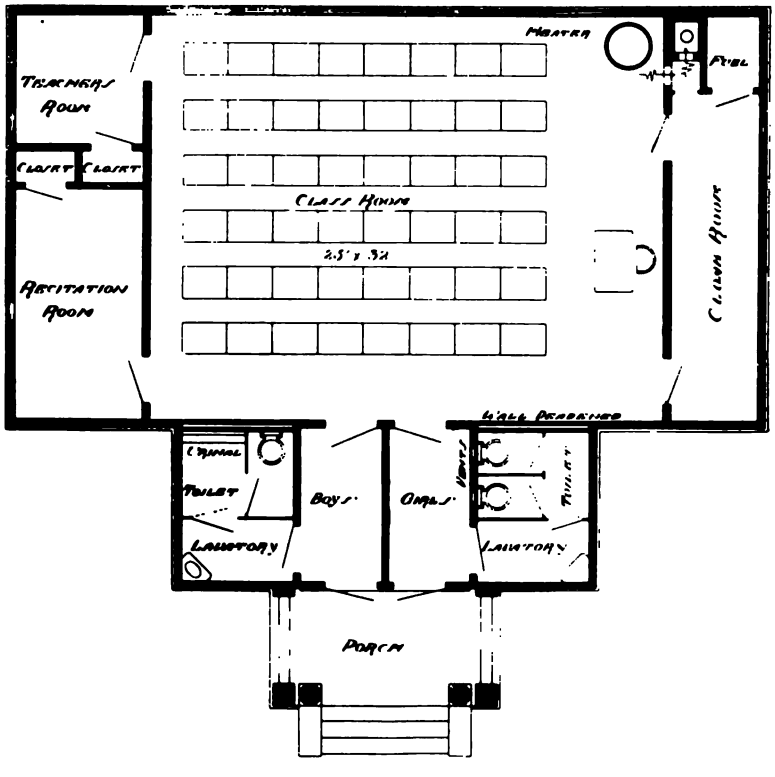

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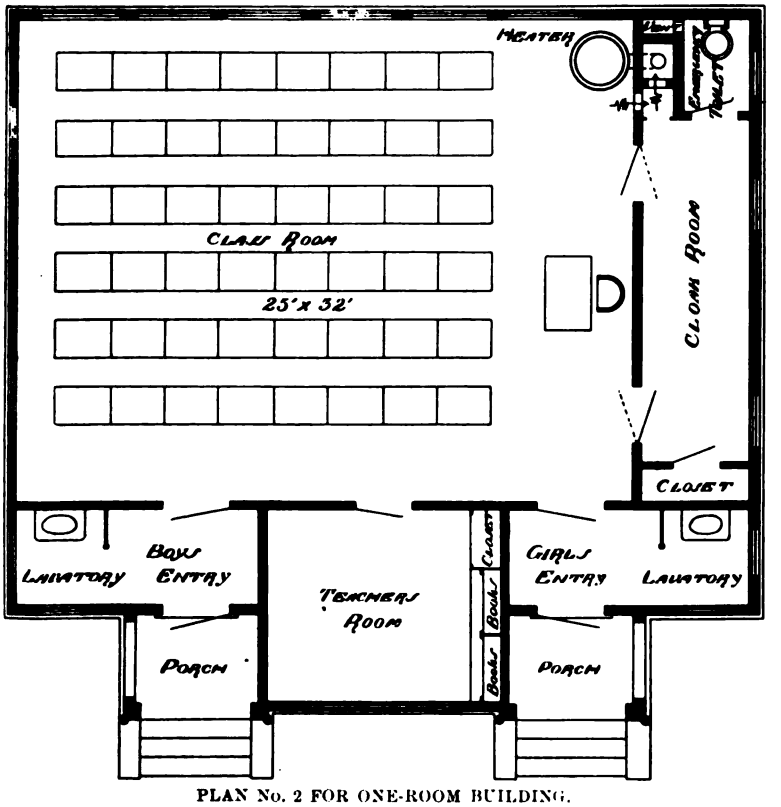


PLAN No. 2 FOR ONE-ROOM BUILDING.

Blackboards should be 2 feet 6 inches from the floor and from 3 feet 6 inches to 4 feet wide, with an extension back of the teacher's desk of two extra feet.

Grooved chalk rails should be provided under blackboards. Over the top of chalk rail, or rather ½ inch from the top, there should be a galvanized wire mesh cover, so that chalk dust can settle through and save the chalk and erasers from being covered with dust. The cover should have a wired edge and be made to open out for cleaning.

The lighting of the class-room is the most important problem in school building. Under no circumstances should a pupil be forced to face the light, and in the best planned school-rooms the teacher is equally favored. The only proper lighting is that introduced over the left shoulder of the pupil. High lights over the blackboard in the rear are better omitted, but are frequently used for architectural effect.

W. H. Weeks, Architect.

FRONT ELEVATION, PLAN No. 2.

The glass surface should equal at least one fifth the floor space and the windows should be not less than 3 feet 6 inches from the floor, coming up as close to the ceiling as the casing and finish will permit. The best glass only should be used, divided where necessary to provide for the proper degree of safety from breakage. Sheet prism glass can now be obtained at a reasonable price, and I would recommend its use in the upper lights of the windows, or at least in the transoms, for by its use the light in the room can be made more uniform.

The shades should be of the best quality and be made double; placed at the center of the window so as to work up and down. The edges should be reinforced and run in grooved pieces so as to prevent a glare of light entering between casing and shade.

There is no good reason why toilets and other conveniences in the plumbing line should not be used in connection with the country schools. The principal trouble heretofore has been in the water supply and drainage; but the water supply can easily be taken care of by means of

a pneumatic tank, placed in the ground near the building, and a force pump properly connected with the tank of the building. The size of the tank must be graded to suit requirements—say about 200 gallons to a class-room. It will then be possible to have running water to all fixtures, sinks, toilets, and basins—all of which can be relied upon. The toilets for the use of scholars should be automatic.

The question of sewage disposal has of late years become a simple matter. Formerly it was necessary to resort to draining into ditches, cesspools, and streams. Now, however, there is no occasion for these, for by the use of the septic system of sewerage, which is considered the only scientific system in use to-day, all sewage can be readily disposed of. Double cisterns are built and connected under ground. The first cistern is divided into two compartments. The first compartment or settling chamber receives the sewage, the liquid portion of which flows in a

W. H. Weeks, Architect.

DESIGN FOR SMALL ONE-ROOM BUILDING—BUILT IN FIELD STONE.

sheet into the second compartment. This in turn flows into the large flush tank, where, when the water reaches a certain point, it is automatically siphoned off into a drain pipe leading to a point where porous terra cotta pipes are run out in different directions. The sewage is distributed through the open joints of these branch pipes, which are not more than 14 feet below the surface of the ground. At this depth the sewage will be oxidized. This arrangement can be simplified so as to give satisfactory results at a very little cost.

The woodwork on the interior of a model country school should be as plain as possible, omitting all fancy molds and quirks, as they are only dust catchers and add to the expense. A natural finish makes the wood more beautiful and desirable. The different rooms should be wainscoted to the specified height. The plastered walls and ceilings should have a good sand finish, as it is more sightly than hard finish, and is freer from cracks where protected by wainscoting. The tinting shows to much better advantage when placed on such a surface.

increased and the length of term has increased. One new school house was built and bonds have been voted for another. Another district is voting on a $3,500 bond issue to-day for the purpose of repairing the school house.

LOS ANGELES COUNTY.

By MARK KEPPEL.

Los Angeles County comprises 145 independent common school districts and shares with Ventura County one joint district.

Fifty-eight districts employ only one teacher, 33 employ only two teachers, 15 employ only three teachers, and 39 employ four or more.

The county contains 25 high schools, taught by 226 teachers.

There are 317 school houses; 62,585 pupils were enrolled, and the average daily attendance was 47,779 for the year. Of this average daily attendance, 16 units belong to the deaf schools, 111 to the boys' evening schools, 1,855 to the kindergartens, 4,537 to the high schools, and 41,260 to the common schools.

There were 1,616 teachers employed, of whom 2 are in the deaf schools, 109 in the kindergartens, 226 in the high, and 1,279 in the common schools.

Of the teachers, 183 were men and 1,433 were women.

GROWTH.

During the school year 1905-06, Los Angeles County gained 5 common school districts, 9 school houses, 185 teachers, 8,049 census children, and 5,355 units of average daily attendance.

The tremendous growth in all lines continues to tax the resources of every district to the very limit. The apparently small increase in the number of school houses is due to the erection of commodious buildings, each of which takes the place of two or more temporary structures.

NEEDS.

That our schools may realize the purpose for which they were instituted and are maintained, and that they may keep abreast of the progress of the world, certain imperative needs must be realized and satisfied.

Schools can do their best only when the teacher has not more than two classes, and the work is supervised by capable principals and special teachers. In several states pupils are transported at public expense, and in this way larger schools are maintained, fewer teachers are employed, longer terms are taught, better salaries are paid, and the most satisfactory results are obtained.

We need a law which will authorize any district to transport its pupils to a central school or schools; and the present law which provides for the organization of union common school districts, and the transportation of their pupils, should be revised and improved so that it may become an operative success.

As long as this county has 58 districts employing one teacher, 33 districts employing only two teachers, and 15 districts employing only three teachers, close and adequate supervision will be impossible, unless California adopts a plan similar to that employed in Massachusetts, where the teachers are grouped and a supervisor is chosen for each group.

The County Superintendent of Schools ought to be authorized to group the schools of the county so that there would be a supervising principal for each group of not less than ten nor more than twenty-five

GRAND AVENUE GRAMMAR SCHOOL—LOS ANGELES.

teachers. The choice of the supervisor should be made by the school authorities governing each particular group. If this forward step were taken, our rural schools would have as close and as efficient supervision as is enjoyed by districts that now employ supervising principals or

ENROLLMENT IN SCHOOLS.

		1899.	1906.	Increase.
Kindergarten, Primary, and Grammar Schools—				
Kindergarten—	Boys	Data for grades not given.	2,502	
	Girls		2,611	
Primary—	Boys		96,230	
	Girls		90,218	
Grammar—	Boys		51,444	
	Girls		57,047	
Total—	Boys	128,296	147,674	19,378
	Girls	125,101	147,265	22,164
Grand total		253,397	294,939	41,542
High Schools—				
First year—	Boys	Data for grades not given.	5,987	
	Girls		7,140	
Second year—	Boys		3,173	
	Girls		4,005	
Third year—	Boys		1,912	
	Girls		2,557	
Fourth year—	Boys		1,302	
	Girls		1,999	
Total—	Boys	4,815	12,374	7,559
	Girls	7,448	15,701	8,253
Grand total		12,263	28,075	15,812

TEACHERS EMPLOYED.

	1899.	1906.	Increase.	Decrease.
Kindergartens—				
Men				
Women	No data.	152	152	
Total		152	152	
Primary and Grammar Schools—				
Men	1,137	887		250
Women	5,806	7,195	1,389	
High Schools—				
Men	259	445	186	
Women	236	692	456	
Grand total	7,438	9,371	2,183	250
Total increase			1,933	

NUMBER OF TEACHERS WHO ARE GRADUATES OF—

	1899.	1906.	Increase.
State Normal Schools—			
Chico	150	343	193
Los Angeles	489	834	345
San Diego		188	188
San Francisco		248	248
San José	1,047	1,478	431
Other Normals	336	558	222
Total	2,022	3,649	1,627
Universities—			
California	238	704	466
Stanford	113	341	228
Accredited	67	179	112
Total	418	1,224	806

FINANCIAL STATISTICS.

	1899.	1906.	Increase.
Primary and Grammar Schools—			
Receipts—			
Balance on hand	$867,231 96	$2,329,252 95	$1,462,020 99
From State funds	3,116,678 42	3,880,740 82	764,062 40
From County funds	2,269,137 97	3,179,964 81	910,826 84
From County or District taxes	421,567 19	501,474 87	79,907 68
From sale of bonds	110,403 63	1,426,596 06	1,316,192 43
From miscellaneous	61,650 61	176,640 78	114,990 17
Total	$6,846,669 78	$11,494,670 29	$4,648,000 51
Expenditures—			
For teachers' salaries	$4,562,994 54	$5,666,045 33	$1,103,050 79
For supplies	1,025,473 62	1,480,097 32	454,623 70
For buildings	397,793 15	1,474,716 24	1,076,923 09
For books and apparatus	88,341 06	106,149 54	17,808 48
Total	$6,074,602 37	$8,727,008 43	$2,652,406 06
High Schools—			
Receipts—			
Balance on hand	Data not given in detail at this time.	$614,944 30	
From State fund		210,570 20	
From taxes		2,294,341 06	
From donations, etc.		45,374 99	
Total		$3,165,230 55	
Expenditures—			
For teachers' salaries	Data not given in detail at this time.	$1,251,949 53	
For supplies		318,104 16	
For buildings		506,593 06	
For books and apparatus		42,202 40	
Total	$729,687 44	$2,118,849 15	$1,389,161 71

VALUATION OF PROPERTY.

	1899.	1906.	Increase.	Decrease.
Kindergartens—				
Lots, buildings, and furniture	Data not given.	$56,310 00	.....	.....
Books and apparatus		3,485 00	.....	.....
Totals	.....	$59,795 00	$59,795 00	.....
Primary and Grammar Schools—				
Lots and houses	$15,247,938 00	$22,639,895 00	$7,391,957 00	.....
School libraries	681,514 00	839,723 00	158,209 00	.....
Apparatus	383,593 00	380,723 00	.....	$2,870 00
Totals	$16,313,045 00	$23,860.341 00	$7,550,166 00	$2,870 00
High Schools—				
Lots and buildings	$2,200,022 00	$4,736,715 00	$2,536,693 00	.....
Apparatus	82,611 00	217,673 00	135,062 00	.....
Libraries	48,045 00	138,626 00	90,581 00	.....
Totals	$2,330,678 00	$5,093,014 00	$2,762,336 00	.....

EXPENDED FOR BUILDINGS IN SEVEN YEARS.

1899*	$397,793 15
1900*	268,157 32
1901*	525,050 16
1902*	439,305 91
1903—Primary and Grammar Schools	654,074 09
High Schools	283,805 38
1904—Primary and Grammar Schools	1,401,635 07
High Schools	333,724 29
1905—Primary and Grammar Schools	1,068,568 76
High Schools	339,532 13
1906—Kindergartens	1,854 40
Primary and Grammar Schools	1,474,716 24
High Schools	506,593 06
Total	$7,693,809.96

* Expenditures for High Schools not given during years 1899 to 1902.

GENERAL INFORMATION, BY COUNTIES.

GIVEN BY COUNTY SUPERINTENDENTS.

ALAMEDA COUNTY.

BY T. O. CRAWFORD.

A general improvement in the character of the work; on the part of teachers generally, a spirit of earnestness; a growing sentiment among the public favorable to public schools is noted. We have too many supplementary books, consequently too much reading, too little study, too little time for trying to get at the bottom of things, hence too much superficiality. In this county we are advising a closer study of the texts which the State has adopted, and are discouraging the use of outside matter.

AMADOR COUNTY.

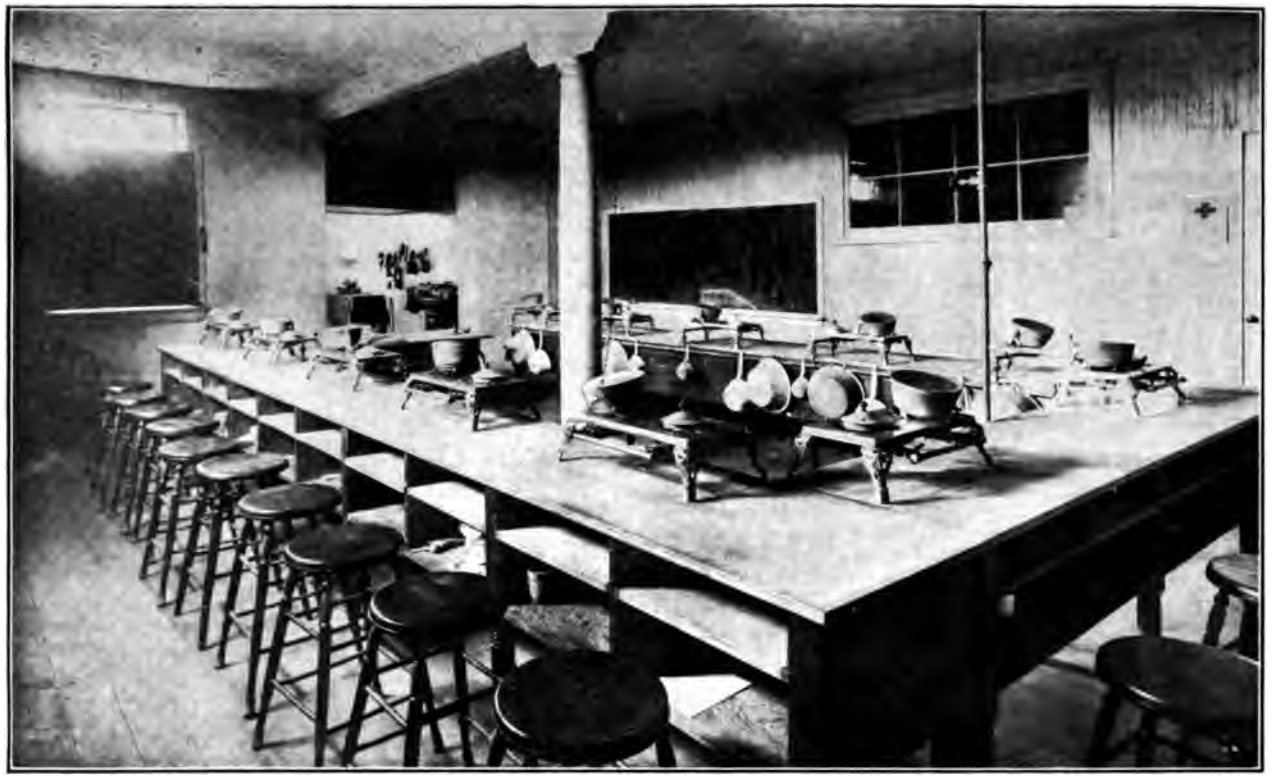
BY GEORGE A. GORDON.

There seems to be an awakening among the trustees and the patrons of the primary and the grammar schools of Amador County to the vast importance of effecting a greater permanence in the employment of the teacher. More satisfactory and pleasanter social relations throughout the different districts, as well as greater progress among the pupils, are coming to be recognized as the results of such a permanence. This plan gives the teacher an opportunity to become better acquainted with the ambitions, the capabilities, and the peculiarities of the patrons of the district as well as of the pupils. The true teacher emphasizes the desirable, the good, and the true. She ministers to the craving minds and, through her knowledge of the individual cases, brought about by a permanency among them, she is enabled to respond with a knowledge that will tend to create a more desirable mental and moral awakening among her pupils. Nomadic teachers are scarce, and this scarcity should decrease. Teachers of the elementary schools are, in my opinion, more important to the State than the teachers of either the high schools or the universities. The teachers of this county are among its best citizens, and it is a great pleasure to note that they strive faithfully to maintain the dignity of their calling.

There seems to be a tendency upon the part of the families resident in outlying districts to move into the nearby towns as a means of securing to their children better school advantages. This year's graduates from the grammar school numbered 77; there being 34 boys and 43 girls.

The Ione Union High School continues to do excellent work. It has been accredited by the University. Its teachers have been selected upon merit, and are well remunerated for their services. The trustees are most earnest in the discharge of their duties. The pupils show by their good work that they appreciate the great privilege of a high school training.

GRAMMAR GRADE ROOM, LONGFELLOW SCHOOL—ALAMEDA.



COOKING CLASS ROOM, LONGFELLOW SCHOOL—ALAMEDA.

CALAVERAS COUNTY.

The term just closed shows about the same enrollment and about the same average attendance as the preceding year. The work for the term has been conducted along "safe, sane, and conservative lines" and good results have been achieved. More time and energy are now given to the acquirement of thoroughness than formerly, and drill on the fundamental principles is made paramount. Present conditions seem to dictate that the aim and purpose of our course of study are about to be realized.

There are two high schools in the county—the Calaveras County High, located at San Andreas, and the Bret Harte Union High, located at Altaville. The combined average daily attendance of both schools for the term was 67. In view of the fact that this is the first year, the attendance is remarkably good. The work for the year in both schools has been very satisfactory.

FRESNO COUNTY.

By GILES N. FREMAN.

Improvements in school buildings and school grounds have added much to the convenience and comfort of teachers and pupils. The buildings that have recently been erected compare favorably with the best in the State. About $100,000 have been expended in repairs and in new buildings during the last school year. With new and better equipment the school work has been better planned and executed.

The teaching force of the county has gained some valuable accessions from the State normals and from the universities.

The method of apportionment of the school funds under the new law has been a great benefit to the rural schools. Under its provisions Fresno County will receive over $14,000 more per year than it did under the old law. The rate of school tax has not increased. There are less than ten counties in the State whose rate of school tax is less than in Fresno County. The school census is greater by seven hundred than in 1905. The number of graduates from the grammar schools is greater by one thousand than in 1905; while the graduates of the high schools exceed the number in 1905 by more than fifty.

The schools are working harmoniously. There is a good attendance, increased interest, and more efficient work.

GLENN COUNTY.

By F. S. REAGER.

The schools of Glenn County were never in better condition than at the present time.

The new method of apportioning the State School Fund made it possible for all schools to hold a nine months' term; and about half of them took advantage of the opportunity; the others were evidently unable to overcome the long-established rule of closing after eight months of school.

HUMBOLDT COUNTY.

By GEORGE UNDERWOOD.

The schools of the county have held their own in number. The teachers are not so good and are getting worse, all sorts of derelicts being able to get back into the ranks by virtue of a general insufficiency of supply of teachers. The far-out districts have in some cases been unable to begin on time, and general dissatisfaction prevails.

The people have responded cheerfully to every call for increased school facilities. Eureka voted a building fund, and three splendid modern school buildings will be ready for use by July 1, 1906. Ferndale Union High School District voted bonds to the amount of $10,000 for a new high school building, and Garberville and Dyerville will put up new buildings.

The people are firmly committed to education. The interest in the high schools is apparent in the increase in the number of grammar school graduates and the enrollment in the eighth grade.

There are too many small districts in the county where the average attendance is below seven, and the course of study shaped on the eight-year plan shuts out older pupils who could attend a part of the year.

The city schools are becoming better and the country schools poorer. The large ungraded schools are sending their share of graduates, but the teachers who can teach them successfully are gradually leaving the ranks of the teaching profession. Only one thing can improve the schools permanently, and that is some inducement for better qualified teachers to enter and abide in the teaching profession. The changes each half-year are disheartening, and when diplomas are awarded to graduates of the grammar schools the teachers who recommended the same may have left the country and no one is at hand to sign the diplomas.

An educational sentiment for increased attention to the primary and grammar schools is needed. A pupil at ten years has as good a right to a good school, grounds, and equipment as one at seventeen, and that fact seems to have been overlooked. Why should it not cost as much to educate a primary pupil as a high school pupil?

KINGS COUNTY.

By MRS. N. E. DAVIDSON.

The schools of Kings County have progressed favorably during the past year. Our teachers have been faithful, earnest, and progressive; the attendance of pupils has been better than ever before, and the interest of parents has manifestly increased. During the school year 159 pupils were granted diplomas of graduation from the grammar schools of the county. Our manner of graduating pupils after a three years' trial we can especially recommend. With our excellent course of study and with two high schools the children of Kings County possess splendid opportunities in the way of educational facilities. A number of new school buildings have been erected during the year.

LAKE COUNTY.

By CHAS. W. HAYCOCK.

The schools of the county are in a prosperous condition. The new State apportionment law has benefited us materially. Salaries have

increased and the length of term has increased. One new school house was built and bonds have been voted for another. Another district is voting on a $3,500 bond issue to-day for the purpose of repairing the school house.

LOS ANGELES COUNTY.

By MARK KEPPEL.

Los Angeles County comprises 145 independent common school districts and shares with Ventura County one joint district.

Fifty-eight districts employ only one teacher, 33 employ only two teachers, 15 employ only three teachers, and 39 employ four or more.

The county contains 25 high schools, taught by 226 teachers.

There are 317 school houses; 62,585 pupils were enrolled, and the average daily attendance was 47,779 for the year. Of this average daily attendance, 16 units belong to the deaf schools, 111 to the boys' evening schools, 1,855 to the kindergartens, 4,537 to the high schools, and 41,260 to the common schools.

There were 1,616 teachers employed, of whom 2 are in the deaf schools, 109 in the kindergartens, 226 in the high, and 1,279 in the common schools.

Of the teachers, 183 were men and 1,433 were women.

GROWTH.

During the school year 1905-06, Los Angeles County gained 5 common school districts, 9 school houses, 185 teachers, 8,049 census children, and 5,355 units of average daily attendance.

The tremendous growth in all lines continues to tax the resources of every district to the very limit. The apparently small increase in the number of school houses is due to the erection of commodious buildings, each of which takes the place of two or more temporary structures.

NEEDS.

That our schools may realize the purpose for which they were instituted and are maintained, and that they may keep abreast of the progress of the world, certain imperative needs must be realized and satisfied.

Schools can do their best only when the teacher has not more than two classes, and the work is supervised by capable principals and special teachers. In several states pupils are transported at public expense, and in this way larger schools are maintained, fewer teachers are employed, longer terms are taught, better salaries are paid, and the most satisfactory results are obtained.

We need a law which will authorize any district to transport its pupils to a central school or schools; and the present law which provides for the organization of union common school districts, and the transportation of their pupils, should be revised and improved so that it may become an operative success.

As long as this county has 58 districts employing one teacher, 33 districts employing only two teachers, and 15 districts employing only three teachers, close and adequate supervision will be impossible, unless California adopts a plan similar to that employed in Massachusetts, where the teachers are grouped and a supervisor is chosen for each group.

The County Superintendent of Schools ought to be authorized to group the schools of the county so that there would be a supervising principal for each group of not less than ten nor more than twenty-five

GRAND AVENUE GRAMMAR SCHOOL—LOS ANGELES.

teachers. The choice of the supervisor should be made by the school authorities governing each particular group. If this forward step were taken, our rural schools would have as close and as efficient supervision as is enjoyed by districts that now employ supervising principals or

city superintendents, and the increased expense would be vastly exceeded by the increased efficiency of the schools.

If poor tools make a poor workman, poor and costly text-books make a poor school. Our schools ought to have free text-books, and the best text-books that the educational genius of the twentieth century can produce. We boast of our free education, but it can not be really free as long as text-books must be provided by the patrons. It is generally true that the largest families are the ones least able to buy text-books.

Beyond the fourth grade the boys leave school much more rapidly than do the girls. The fact that all boys must be wage-earners, while only a portion of the girls must be, possibly accounts for a part of this condition, but it is due more likely to the fact that our schools do not meet the needs of the boys after the fourth year. Our education must be more practical. Manual training, including wood-work, cooking, sewing, and instruction in agriculture, must be given a much larger place than it now occupies.

Longer terms for the majority of our schools are a necessity. For the year just closed each school, with the exception of one, maintained at least a nine months' term. Ten months is not too much for any school.

The presence of only 183 men in a teaching body of 1,616 teachers is distinctly a menace to the best interests of the boys and girls in the grammar grades and in the high school. It is not best for any child to be taught exclusively by a man or by a woman. We can get more men into the profession only by raising the salaries paid to the entire teaching body. The average salary for the year just closed is $82.73 for a term of nine months, or only $745 per year. The preparation required to fit one for teaching will enable every man in the profession to earn at least $100 per month, twelve months in the year. Such being the case it is no wonder that men will not stay in the profession.

The high schools of our county are doing a great work, but they are not doing the work that they could do and ought to do. Their work is shaped to meet the requirements of the State University, notwithstanding the fact that less than one fourth of those who attend the high schools can ever reach the university. If all the boys and girls attending the high schools of Los Angeles County were to attend the State University, it could not receive a pupil from any other county in the State. The high school ought to fit people for life. This ought to be the aim of the high school, and fitting for the university ought to be the result of this and not the beginning and the end of it.

If the high schools are to do their duty to the children, they must give an increasingly large share of their time to commercial, industrial, and technical training.

The State is maintaining five normal schools at an enormous expense for the training of the teachers and those schools ought to widen their courses of instruction so that a graduate from a State Normal School, if the graduate takes the proper course in that school, should be entitled to a certificate to teach his particular line of work in any school in the State. As matters now stand, the normal schools do not prepare teachers for industrial, or commercial, or technical, or high school teaching.

The Supreme Court of the State, in the case of *Los Angeles County* vs. *State Superintendent Thomas J. Kirk*, rendered a decision which places the deaf schools, the night schools, and the kindergarten schools

ALHAMBRA CITY HIGH SCHOOL—LOS ANGELES COUNTY.

outside of the common school system of the State and makes these schools a charge solely upon the district which maintains them. The decision of the court was in accordance with the law, but the law works a great wrong and ought to be changed.

MARIPOSA COUNTY.

By JULIA L. JONES.

Our schools have done well this year in spite of some irregularity of attendance resulting from high water and bad roads and trails. It has been a very hard winter and in many districts children have for days been unable to travel the one, two, three, and even four miles to school. I believe this is the only reason for the irregularity in attendance, and it is a sufficient and a justifiable one.

I believe that the instruction is becoming more practical and sensible and that pupils are feeling a greater interest in school work, and I know that more of our pupils are continuing school work beyond the grammar schools than in former years.

PLACER COUNTY.

By C. N. SHANE.

The past year has been one of steady and satisfactory growth in our Placer County schools. The general improvement along the line of practical education has been very noticeable. Our teachers are earnest and capable and their aim is to make the instruction as applicable as possible to the needs of our boys and girls.

The spirit of improvement is general. Many of our teachers are not satisfied with the preparation they already have and are trying to take summer-school work wherever possible.

Our teachers' reading work, as outlined by a committee on professional reading at the Institute of 1904, was well done, and many teachers are now reading the work laid down at the Institute of 1905 to be discussed at the session of 1906.

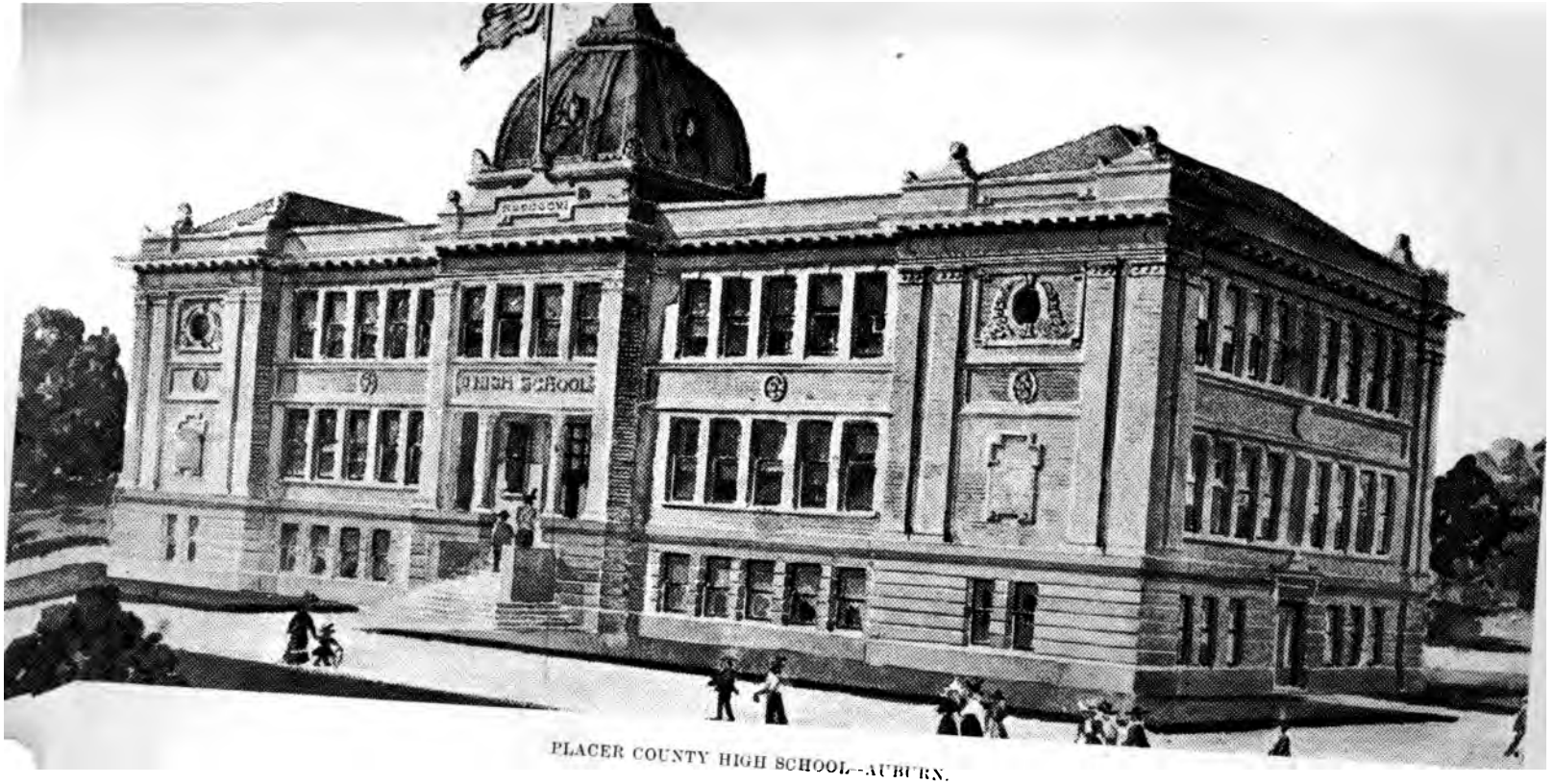
Our long-promised new high school building is now an assured fact. The basement walls are completed and we hope to see the building completed by the first of December. It is planned to cost $35,000 and to accommodate 250 students.

Our high school is becoming more of a stimulus to higher education. Boys and girls who might never have had ambition to more than finish the grammar school are now enthusiastic to the point of striving for a university education. But best of all is the impulse it gives to the spirit of education in the grammar and primary grades.

During the year we have lost one district by being joined to another, and one has lapsed.

Our Supervisors are lenient to our schools, and despite the fact that Placer County profited largely by the new system of State apportionment they made but a slight reduction in our tax rate and thereby have placed our schools on a most excellent financial basis. This next year will show a decided increase in length of term and also in salaries of teachers.

I feel that we have much to be grateful for in the line of educational advantages and I believe that Placer County is steadily moving upward.



PLACER COUNTY HIGH SCHOOL—AUBURN.

PLUMAS COUNTY.

By TILLIE N. KRUGER.

The schools of the county are in a very prosperous condition. Greenville voted bonds to build a $10,000 school building, but owing to some technicality the election was declared illegal. It is understood, however, that another election will be held.

The terms have been longer than heretofore and much more interest has been taken in school work by people generally.

The establishment of a high school has been discussed and a determined effort is being made to have at least one in some section of the county.

In several of the districts the salary of the teacher has been increased over that of last year.

SAN BENITO COUNTY.

By JOHN GARNER.

The work done in the public schools of San Benito County during the past year has been very satisfactory. The results have been good. Our school funds have been ample, salaries have materially advanced in almost all the schools, and we have had a very harmonious year with trustees, teachers, and parents.

Arbor Day was observed in the various schools, which resulted in repairing the buildings and the beautifying of the grounds by the planting of shade and ornamental trees.

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During the past year a steady progress has been made in the schools of the county, as shown by an increased tenure of office by teachers, a greater number of normal school and university graduates among the teachers, an increase in the number of months schools have been maintained in the rural districts, and an increased display of enthusiasm and earnestness on the part of teachers and trustees.

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In the line of progress, it is to be noted that the average monthly salary paid to teachers and principals in the county has risen the past year from $68.75 to $71.76. This increase has been possible because of the new method of apportionment of State school money by the State Superintendent of Public Instruction. For the same reason, in part, the primary-grammar school balance on hand at the close of this school year is larger than that of the previous year by about $10,500.

In some of the districts a conservative tendency on the part of the trustees prevents their paying the teachers any more than they paid when the school income was smaller. Time—and perhaps new trustees—will overcome this conservatism.

Cambria has a new three-room building almost ready for occupancy. Oceano has added a room, so that two teachers may be employed. Phillips has renovated its building. The Arroyo Grande Union High School building, costing about $4,000, is finished; and the San Luis Obispo High School building will be ready for use August 6. The transfer of the San Luis Obispo High School from the upper floor of one of our grammar school buildings to a building of its own gives the grammar school abundant room and relieves a crowded condition that has existed in the lower grades the past three years.

As last year, so this year, the County Board of Education is troubled by the small number of eighth grade graduates who passed the board's June examination—only fifty-four out of one hundred and seventy-two. There is no question as to the fairness of the examination given by the board. Consequently the board is thinking of combining with the examination some other method of determining the fitness of pupils to receive diplomas of graduation.

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The teachers and pupils were much interested in the coming of the National Educational Association and were much disappointed when it had to be postponed.

As the new State text-books will have been adopted, the County Board of Education is considering plans for a new course of study for the schools of the county for next year. It is the wish of the members of the board to prepare one as nearly perfect as possible.

The average daily attendance of the schools of the county has increased over one hundred during the year.

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The schools of this county are in fairly good condition. They would be in much better condition if the County Superintendent could have time to really supervise the schools. It is utterly impossible for one to do any real supervision with the amount of purely clerical work that has to be done. Looking backward over nearly twenty-four years of experience I see so much that might have been done under better conditions. Two thirds of that time has been spent in mere clerical work which should have been done by a deputy at comparatively little cost.

SHASTA COUNTY.

By KATE A. BRINCARD.

Much interest has been taken in schools and school affairs during the year just past. Three new school houses have been built. The school house at Kennet cost $8,000. The fourth new school house is in course of construction at the Mammoth Mine.

This year's report shows that the average length of the school term has been 158 days. One hundred and eighty-seven pupils were graduated from the grammar schools of the county and twenty-four from the high school, including eighteen from the commercial department of the high school.

After maintaining eight months' school, the school houses throughout the county have been more or less repaired and improved.

The trustees of the districts of the county have given their united support for the betterment of the schools, and I feel that much good has been accomplished.

SIERRA COUNTY.

By BELLE ALEXANDER.

In most of the school districts in this county the outlook is encouraging. Better salaries are being paid in the majority of the schools than heretofore, and as a rule trustees show good judgment in the selection of teachers, the result being a corps of able and efficient instructors.

Under a new plan recently adopted by the County Board of Education, the examination of pupils for graduation from the grammar schools is now held in five districts in the county, one member of the board conducting the examination in each district. The effect is that more interest is manifested among teachers and pupils, which will be productive of good results.

SISKIYOU COUNTY.

By MRS. W. J. BALFREY.

The schools of this county are in a marked state of improvement, due to the change in the method of apportioning the State school money. All rural schools as well as the town schools are able to maintain school eight months in the year, with a uniform salary. In consequence, the standard of work has been raised, the course of study made the same in all schools, and the teachers' salaries placed on a more certain and equitable basis. A universal betterment has resulted in the schools.

For the first time in the history of the county a union district has been formed. It promises to be so successful that other districts are considering consolidation.

SOLANO COUNTY.

By DANIEL H. WHITE.

During the past year satisfactory progress has been made in the schools of Solano County. Teachers, trustees, pupils, and patrons have worked harmoniously with one object in view—the betterment of the schools of the county.

BURLINGAME GRAMMAR SCHOOL SAN MATEO COUNTY.

SAN MATEO GRAMMAR SCHOOL SAN MATEO COUNTY.

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The legislative enactment of 1905, providing for a change in the method of apportioning school funds, together with a liberal county school tax, has been the means of bettering the salary question in the county. Teachers, especially those in the rural schools, are now receiving more remuneration for their services. These schools are also able to continue in session for a longer period during the year.

Some little difficulty has been experienced and some adverse criticism expressed on account of the changes of text-books necessary to comply with the new adoptions made by the State Board of Education. The criticism, however, has easily been removed when the reasons for the changes have been explained. The new adoptions meet with the approval of the teachers of the county.

Trustees and taxpayers are beginning to realize the necessity for better school facilities. Special taxes have been voted in several of the districts to obtain funds for this purpose. School grounds are being improved, and school rooms are being made more attractive. With such a spirit prevailing it can be seen that the citizens of Solano County are enthusiastic as far as educational matters are concerned.

STANISLAUS COUNTY.

By FLORENCE BOGGS.

During the school year of 1905-06 two new school districts, two union high school districts, and one union school district were formed. Bonds have been voted and buildings will be erected at once.

Bonds were voted in the Oakdale union high school district to the amount of $20,000 for the purpose of building a new high school, which is now in course of construction.

A four-room building is being erected in Elmdale school district. This is made necessary owing to the congested condition of the present one-room building consequent on the influx of new settlers in the county.

Plans for a new primary school building have been adopted for the Modesto school district. Several rural school districts have voted a special tax each for the purpose of building additions for primary classes.

The teaching force has been increased and undoubtedly strengthened by changes made this year.

SUTTER COUNTY.

By CHAS. W. WARD.

There have been no important changes in the schools and school work of the county during the year. The work seems to be in better shape and there is an expressed satisfaction among patrons and teachers of the schools that the work is steadily improving. We had fifty per cent more graduates this year than formerly and the work in the lower grades seemed much more thorough and satisfactory. This no doubt was partly due to the fact that all but six schools of the county increased the length of term about one month; this was made possible by the new method of apportioning the State school money, this county getting $5,928.81 more than it would have received under the old law.

The interest in schools and general education is growing, and our people take much pride in the school work of the county.

TRINITY COUNTY.

By LIZZIE H. FOX.

The year 1905-06 for the Trinity County schools has been one of continued prosperity; with the pupils recognizing to a marked extent their opportunities and corresponding responsibilities, with the teachers working in harmony and mutual confidence with the trustees, patrons and superintendent, unusual interest has marked the progress of the educational work.

The efficiency of work by teachers and pupils is of a high order, and the success is due principally to the efforts of the many capable and earnest teachers, and to wise and judicious administration of the educational interests by the boards of trustees.

Consistent with the resources of the districts and with a deep appreciation of the class and character of the work, the teachers' salaries have been increased, and much has been accomplished to elevate the standard of our public schools.

May the strong and harmonious corps of teachers, the happy coöperative body of pupils, our people, men and women, be so united in unselfish public spirit that we may perform wisely the educational duties that the past, the present, and the future have laid upon us.

TUOLUMNE COUNTY.

By J. P. MORGAN.

Good work is being done in the Tuolumne County schools. Sixty-six applicants for diplomas of graduation from the grammar schools appeared before the County Board of Education. Of this number fifty-nine were successful. This shows that the work in the grades is being well done.

The school buildings are well kept and are comfortable. Nearly all are equipped with modern furniture, good apparatus, and fine blackboards.

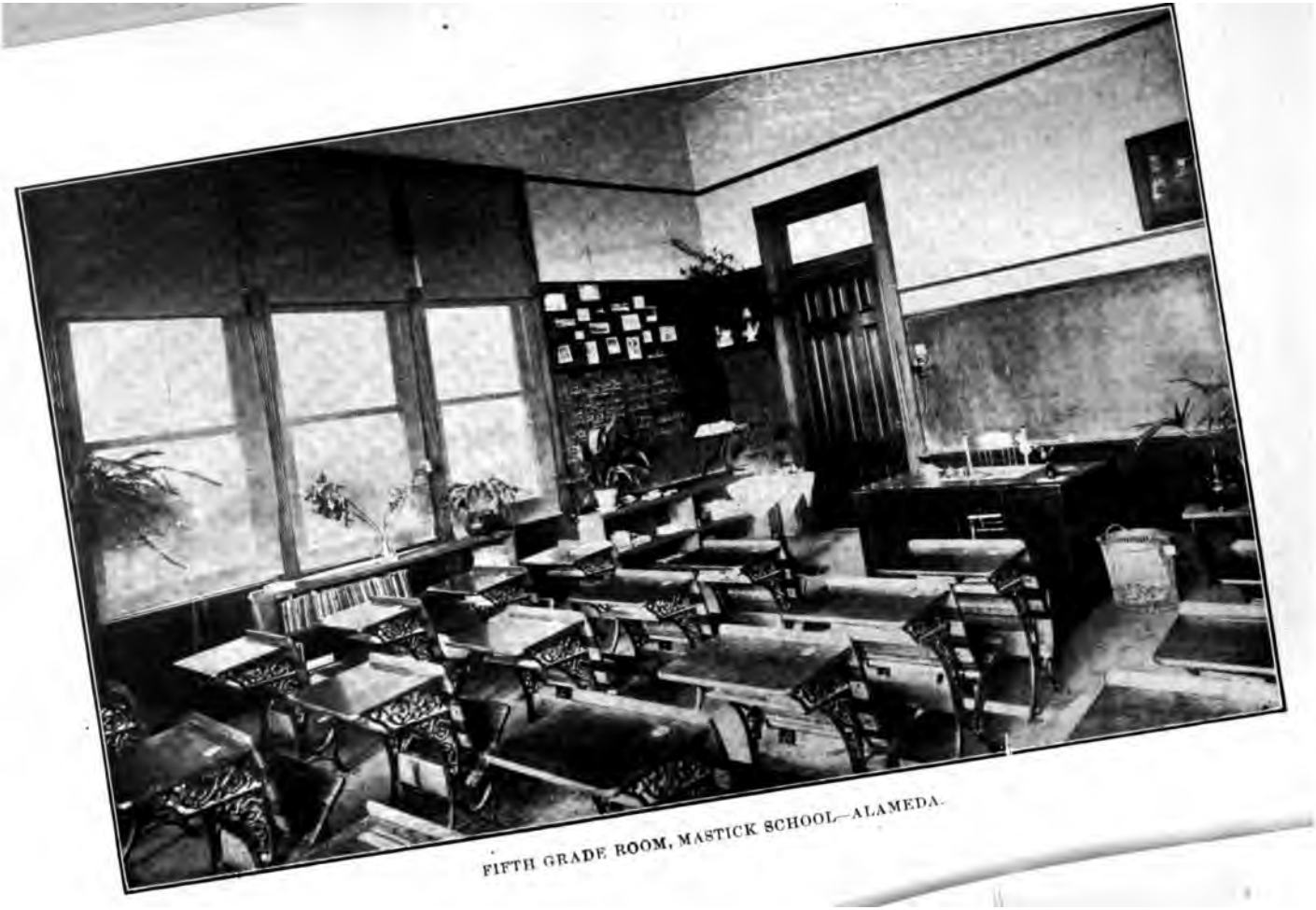
The foundation of our new $35,000 high school building is completed and we expect to have the building ready for occupancy at an appropriate time this fall—Thanksgiving day.

YUBA COUNTY.

By J. A. SCOTT.

The schools of the county as a whole progressed very favorably during the past year. The teachers were an efficient and a progressive body of workers.

Upon the whole the past year has been a very prosperous one for the schools of the county. The school property throughout the county is generally in good condition.



FIFTH GRADE ROOM, MASTICK SCHOOL—ALAMEDA.

STATISTICS

OF

PRIMARY AND GRAMMAR SCHOOLS.

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The schools of this county are in fairly good condition. They would be in much better condition if the County Superintendent could have time to really supervise the schools. It is utterly impossible for one to do any real supervision with the amount of purely clerical work that has to be done. Looking backward over nearly twenty-four years of experience I see so much that might have been done under better conditions. Two thirds of that time has been spent in mere clerical work which should have been done by a deputy at comparatively little cost.

SHASTA COUNTY.

By KATE A. BRINCARD.

Much interest has been taken in schools and school affairs during the year just past. Three new school houses have been built. The school house at Kennet cost $8,000. The fourth new school house is in course of construction at the Mammoth Mine.

This year's report shows that the average length of the school term has been 158 days. One hundred and eighty-seven pupils were graduated from the grammar schools of the county and twenty-four from the high school, including eighteen from the commercial department of the high school.

After maintaining eight months' school, the school houses throughout the county have been more or less repaired and improved.

The trustees of the districts of the county have given their united support for the betterment of the schools, and I feel that much good has been accomplished.

SIERRA COUNTY.

By BELLE ALEXANDER.

In most of the school districts in this county the outlook is encouraging. Better salaries are being paid in the majority of the schools than heretofore, and as a rule trustees show good judgment in the selection of teachers, the result being a corps of able and efficient instructors.

Under a new plan recently adopted by the County Board of Education, the examination of pupils for graduation from the grammar schools is now held in five districts in the county, one member of the board conducting the examination in each district. The effect is that more interest is manifested among teachers and pupils, which will be productive of good results.

SISKIYOU COUNTY.

By MRS. W. J. BALFREY.

The schools of this county are in a marked state of improvement, due to the change in the method of apportioning the State school money. All rural schools as well as the town schools are able to maintain school eight months in the year, with a uniform salary. In consequence, the standard of work has been raised, the course of study made the same in all schools, and the teachers' salaries placed on a more certain and equitable basis. A universal betterment has resulted in the schools.

For the first time in the history of the county a union district has been formed. It promises to be so successful that other districts are considering consolidation.

SOLANO COUNTY.

By DANIEL H. WHITE.

During the past year satisfactory progress has been made in the schools of Solano County. Teachers, trustees, pupils, and patrons have worked harmoniously with one object in view—the betterment of the schools of the county.

BURLINGAME GRAMMAR SCHOOL SAN MATEO COUNTY.

SAN MATEO GRAMMAR SCHOOL SAN MATEO COUNTY.

The legislative enactment of 1905, providing for a change in the method of apportioning school funds, together with a liberal county school tax, has been the means of bettering the salary question in the county. Teachers, especially those in the rural schools, are now receiving more remuneration for their services. These schools are also able to continue in session for a longer period during the year.

Some little difficulty has been experienced and some adverse criticism expressed on account of the changes of text-books necessary to comply with the new adoptions made by the State Board of Education. The criticism, however, has easily been removed when the reasons for the changes have been explained. The new adoptions meet with the approval of the teachers of the county.

Trustees and taxpayers are beginning to realize the necessity for better school facilities. Special taxes have been voted in several of the districts to obtain funds for this purpose. School grounds are being improved, and school rooms are being made more attractive. With such a spirit prevailing it can be seen that the citizens of Solano County are enthusiastic as far as educational matters are concerned.

STANISLAUS COUNTY.

By FLORENCE BOGGS.

During the school year of 1905-06 two new school districts, two union high school districts, and one union school district were formed. Bonds have been voted and buildings will be erected at once.

Bonds were voted in the Oakdale union high school district to the amount of $20,000 for the purpose of building a new high school, which is now in course of construction.

A four-room building is being erected in Elmdale school district. This is made necessary owing to the congested condition of the present one-room building consequent on the influx of new settlers in the county.

Plans for a new primary school building have been adopted for the Modesto school district. Several rural school districts have voted a special tax each for the purpose of building additions for primary classes.

The teaching force has been increased and undoubtedly strengthened by changes made this year.

SUTTER COUNTY.

By CHAS. W. WARD.

There have been no important changes in the schools and school work of the county during the year. The work seems to be in better shape and there is an expressed satisfaction among patrons and teachers of the schools that the work is steadily improving. We had fifty per cent more graduates this year than formerly and the work in the lower grades seemed much more thorough and satisfactory. This no doubt was partly due to the fact that all but six schools of the county increased the length of term about one month; this was made possible by the new method of apportioning the State school money, this county getting $5,928.81 more than it would have received under the old law.

The interest in schools and general education is growing, and our people take much pride in the school work of the county.

TRINITY COUNTY.

By LIZZIE H. FOX.

The year 1905-06 for the Trinity County schools has been one of continued prosperity; with the pupils recognizing to a marked extent their opportunities and corresponding responsibilities, with the teachers working in harmony and mutual confidence with the trustees, patrons and superintendent, unusual interest has marked the progress of the educational work.

The efficiency of work by teachers and pupils is of a high order, and the success is due principally to the efforts of the many capable and earnest teachers, and to wise and judicious administration of the educational interests by the boards of trustees.

Consistent with the resources of the districts and with a deep appreciation of the class and character of the work, the teachers' salaries have been increased, and much has been accomplished to elevate the standard of our public schools.

May the strong and harmonious corps of teachers, the happy coöperative body of pupils, our people, men and women, be so united in unselfish public spirit that we may perform wisely the educational duties that the past, the present, and the future have laid upon us.

TUOLUMNE COUNTY.

By J. P. MORGAN.

Good work is being done in the Tuolumne County schools. Sixty-six applicants for diplomas of graduation from the grammar schools appeared before the County Board of Education. Of this number fifty-nine were successful. This shows that the work in the grades is being well done.

The school buildings are well kept and are comfortable. Nearly all are equipped with modern furniture, good apparatus, and fine blackboards.

The foundation of our new $35,000 high school building is completed and we expect to have the building ready for occupancy at an appropriate time this fall—Thanksgiving day.

YUBA COUNTY.

By J. A. SCOTT.

The schools of the county as a whole progressed very favorably during the past year. The teachers were an efficient and a progressive body of workers.

Upon the whole the past year has been a very prosperous one for the schools of the county. The school property throughout the county is generally in good condition.

FIFTH GRADE ROOM, MASTICK SCHOOL, ALAMEDA.

TABLE No. 2—Continued.

Grade of School.

Counties.	Grammar.		Primary	
	1905.	1906.	1905.	1906.
Alameda	196	203	227	236
Alpine	3	3		3
Amador	33	31	30	31
Butte	51	57	23	17
Calaveras	53	49	15	17
Colusa	29	34	23	17
Contra Costa	61	70	35	32
Del Norte	13	14	6	5
El Dorado	23	43	40	23
Fresno	118	122	8	10
Glenn	24	32	21	9
Humboldt	25	26	78	79
Inyo	14	14	4	4
Kern	67	66		
Kings	31	29	21	27
Lake	39	41	1	
Lassen	30	30	7	6
Los Angeles	502	559	562	625
Madera	35	35		
Marin	47	53	27	23
Mariposa	30	28	3	4
Mendocino	102	121	18	
Merced	57	56	1	
Modoc	31	34	10	7
Mono	8	9	1	
Monterey	83	80	48	48
Napa	38	45	12	5
Nevada	52	54	25	23
Orange	70	75	64	61
Placer	60	54	23	28
Plumas	27	26	3	2
Riverside	13	42	49	19
Sacramento	93	112	120	103
San Benito	28	32	24	21
San Bernardino	67	71	110	125
San Diego	96	134	25	65
San Francisco	33	27	46	43
San Joaquin	75	66	22	17
San Luis Obispo	84	90	8	3
San Mateo	42	42	24	25
Santa Barbara	38	53	72	64
Santa Clara	162	165	122	118
Santa Cruz	71	74	47	40
Shasta	90	95	35	31
Sierra	14	10	10	9
Siskiyou	73	80	12	5
Solano	73	82	39	32
Sonoma	102	104	36	33
Stanislaus	53	56	2	
Sutter	33	35	8	6
Tehama	66	65	13	13
Trinity	5	5	20	20
Tulare	95	100	9	2
Tuolumne	41	39	13	15
Ventura	56	59	32	30
Yolo	34	41	43	36
Yuba	37	42	10	7
Totals	3,526	3,814	2,287	2,221

MONTECITO GRAMMAR SCHOOL, SANTA BARBARA COUNTY.

STATISTICS OF PRIMARY AND GRAMMAR SCHOOLS.

TABLE No. 1—CENSUS STATISTICS FOR THE SCHOOL YEARS ENDING JUNE 30, 1905, AND JUNE 30, 1906.

Number of Families Listed, and Number of White Children between Five and Seventeen Years of Age.

Counties.	Number of Families Listed.		Number of White Children Between 5 and 17.					
			1905.			1906.		
	1905.	1906.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Alameda	20,553	22,811	17,782	17,736	35,518	19,494	19,746	39,240
Alpine	29	43	23	36	59	33	34	67
Amador	1,359	1,370	1,187	1,133	2,320	1,211	1,118	2,329
Butte	2,857	3,062	2,429	2,397	4,826	2,554	2,576	5,130
Calaveras	1,432	1,435	1,377	1,239	2,616	1,330	1,225	2,555
Colusa	970	924	953	871	1,824	934	785	1,729
Contra Costa	3,051	3,253	2,591	2,486	5,077	2,753	2,704	5,457
Del Norte	369	371	310	335	645	298	321	619
El Dorado	1,116	1,060	959	896	1,855	931	877	1,808
Fresno	7,281	7,748	6,072	5,927	11,999	6,415	6,300	12,715
Glenn	707	756	627	600	1,227	708	668	1,376
Humboldt	3,992	3,549	3,777	3,678	7,455	3,937	3,804	7,741
Inyo	499	527	365	357	722	371	380	751
Kern	2,589	2,567	2,070	2,070	4,140	2,066	2,078	4,144
Kings	1,530	1,652	1,385	1,331	2,716	1,428	1,394	2,822
Lake	840	866	708	677	1,385	748	719	1,467
Lassen	678	604	533	515	1,048	481	481	962
Los Angeles	42,641	53,399	33,560	33,009	66,569	37,623	36,835	74,458
Madera	899	879	732	710	1,442	714	682	1,396
Marin	1,948	2,248	2,266	1,770	4,036	2,095	2,000	4,095
Mariposa	454	466	418	406	824	416	392	808
Mendocino	2,779	2,888	2,500	2,441	4,941	2,562	2,473	5,035
Merced	1,390	1,534	1,341	1,283	2,624	1,447	1,403	2,850
Modoc	762	731	655	628	1,283	642	616	1,258
Mono	235	229	151	147	298	150	145	295
Monterey	2,687	2,377	2,451	2,407	4,858	2,500	2,422	4,922
Napa	1,914	2,002	1,705	1,616	3,321	1,754	1,664	3,418
Nevada	2,071	2,075	1,724	1,671	3,395	1,727	1,705	3,432
Orange	3,560	3,812	3,491	3,246	6,737	3,483	3,378	6,861
Placer	1,809	1,803	1,529	1,559	3,088	1,505	1,505	3,010
Plumas	490	523	376	396	772	374	393	767
Riverside	3,128	3,349	2,747	2,583	5,330	2,739	2,626	5,365
Sacramento	5,961	5,801	4,720	4,641	9,361	4,890	4,780	9,670
San Benito	941	882	799	816	1,615	761	802	1,563
San Bernardino	5,571	5,786	4,434	4,365	8,799	4,650	4,504	9,154
San Diego	4,707		4,226	3,946	8,172	4,504	4,288	8,792
San Francisco	37,741	39,081	48,036	46,809	94,845	49,651	48,668	98,319
San Joaquin	4,621	4,792	3,921	4,018	7,939	4,164	4,120	8,284
San Luis Obispo	2,279	2,409	2,467	2,313	4,780	2,433	2,323	4,756
San Mateo	1,843	1,983	1,881	1,663	3,544	1,996	1,819	3,815
Santa Barbara	3,160	2,997	2,648	2,518	5,166	2,777	2,678	5,455
Santa Clara	9,039	9,377	7,955	7,856	15,811	8,331	8,226	16,557
Santa Cruz	3,116	3,302	2,693	2,872	5,565	2,849	2,889	5,738
Shasta	2,109	2,135	1,908	1,801	3,709	1,837	1,724	3,560
Sierra	490	484	394	407	801	376	420	796
Siskiyou	2,068	2,040	1,818	1,786	3,604	1,778	1,760	3,538
Solano	2,940	2,980	2,634	2,487	5,121	2,736	2,635	5,371
Sonoma	5,863	5,837	5,295	5,159	10,454	5,297	5,234	10,531
Stanislaus	1,699	1,817	1,528	1,506	3,034	1,697	1,614	3,311
Sutter	760	776	725	607	1,332	725	630	1,355
Tehama	1,480	1,447	1,351	1,379	2,730	1,362	1,326	2,688
Trinity	405	396	383	318	701	341	326	667
Tulare	3,155	3,482	3,054	3,039	6,093	3,278	3,100	6,378
Tuolumne	1,309	1,299	1,151	1,119	2,270	1,149	1,098	2,247
Ventura	2,106	2,056	1,987	1,897	3,884	1,995	1,875	3,870
Yolo	1,653	1,671	1,466	1,551	3,017	1,437	1,494	2,931
Yuba	992	1,042	886	867	1,753	905	872	1,777
Totals	222,631	239,899	207,154	201,896	409,050	217,341	212,664	430,005

TABLE No. 1—Continued.

Number of Negro Children between Five and Seventeen Years of Age.

Counties.	1905.			1906.		
	Boys.	Girls.	Total.	Boys.	Girls.	Tot
Alameda	182	177	359	124	110	
Alpine						
Amador		2	2		2	
Butte	8	6	14	11	13	
Calaveras		1	1		1	
Colusa	7	6	13	8	6	
Contra Costa	4	8	12	4	3	
Del Norte						
El Dorado	4	2	6	5	1	
Fresno	68	60	128	68	71	
Glenn	3	2	5	2	2	
Humboldt						
Inyo	2	2	4	1	2	
Kern	22	31	53	30	36	
Kings	9	13	22	14	19	
Lake	2	2	4	2	2	
Lassen						
Los Angeles	528	566	1,094	602	630	
Madera	7	2	9	4	0	
Marin	3	7	10	2	4	
Mariposa		2	2		1	
Mendocino	1	1	2	1	1	
Merced	6	8	14	6	6	
Modoc						
Mono						
Monterey	7	8	15	6	3	
Napa	1	3	4	1	2	
Nevada	3	2	5	1		
Orange	11	1	12	13	8	
Placer	1	3	4	2	3	
Plumas						
Riverside	48	59	107	32	44	
Sacramento	48	61	109	61	59	
San Benito	6	4	10	6	4	
San Bernardino	41	44	85	41	45	
San Diego	32	24	56	45	53	
San Francisco	340	331	671	523	349	
San Joaquin	39	25	64	37	23	
San Luis Obispo	7	1	8	8	3	
San Mateo	8	4	12	6	3	
Santa Barbara		2	2	1	2	
Santa Clara	28	17	45	15	26	
Santa Cruz	5	8	13	10	13	
Shasta	11	22	33	13	17	
Sierra		1	1			
Siskiyou	7	6	13	11	9	
Solano	14	10	24	15	9	
Sonoma	1		1	2	3	
Stanislaus	11	12	23	10	8	
Sutter						
Tehama	13	21	34	11	18	
Trinity						
Tulare	5	6	11	2	7	
Tuolumne						
Ventura	6	3	9	3	5	
Yolo	26	19	45	29	18	
Yuba	25	31	56	27	29	
Totals	1,600	1,626	3,226	1,644	1,673	

TABLE No. 1—Continued.

Number of Indian Children, between Five and Seventeen Years of Age, whose Parents or Guardians Pay Taxes, or Do Not Live in the Tribal Relation or on Government Reservations.

Counties.	1905.			1906.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Alameda	5	2	7	5	8	13
Alpine				9	6	15
Amador	24	19	43	21	17	38
Butte	48	36	84	42	33	75
Calaveras	6	10	16	8	20	28
Colusa	10	5	15	9	6	15
Contra Costa						
Del Norte	36	28	64	35	35	70
El Dorado	28	29	57	28	32	60
Fresno	56	49	105	46	34	80
Glenn	5	4	9	4	4	8
Humboldt	150	131	281	111	99	210
Inyo	76	105	181	80	106	186
Kern	37	42	79	33	35	68
Kings	27	12	39	11	18	29
Lake	43	37	80	48	38	86
Lassen	76	74	150	57	69	126
Los Angeles	37	77	114	54	45	99
Madera	53	38	91	49	61	110
Marin				1		1
Mariposa	18	28	46	19	28	47
Mendocino	120	132	252	98	122	220
Merced				2	2	4
Modoc	61	45	106	43	38	81
Mono	65	60	125	61	66	127
Monterey	17	11	28	5	7	12
Napa				2		2
Nevada	7	4	11	9	5	14
Orange	6	4	10	30	37	67
Placer	15	11	26	14	11	25
Plumas	45	55	100	54	60	114
Riverside	77	76	153	133	110	243
Sacramento	11	10	21	12	12	24
San Benito	6	1	7	4	1	5
San Bernardino	108	75	183	170	123	293
San Diego	167	121	288	104	95	199
San Francisco		1	1		1	1
San Joaquin						
San Luis Obispo	6	7	13	6	15	21
San Mateo					4	4
Santa Barbara		2	2	1	1	2
Santa Clara				5		5
Santa Cruz	3	4	7		4	4
Shasta	89	94	183	79	83	162
Sierra	1	1	2	2	4	6
Siskiyou	77	66	143	78	70	148
Solano	3	2	5	8	2	10
Sonoma	39	50	89	40	27	67
Stanislaus	6	5	11	4	4	8
Sutter						
Tehama	6	10	16	3	10	13
Trinity	4	2	6	8	7	15
Tulare	10	12	22	11	18	29
Tuolumne	22	8	30	17	12	29
Ventura	49	28	77	21	16	37
Yolo	2	2	4	3	3	6
Yuba	7	3	10	6	4	10
Totals	1,764	1,628	3,392	1,703	1,668	3,371

TABLE No. 1—Continued.

Native-born Mongolians between Five and Seventeen Years of Age.

Counties.	1905.			1906.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Alameda	42	18	60	121	100	221
Alpine						
Amador	9	7	16	8	9	17
Butte	9	4	13	9	4	13
Calaveras	1	1	2	1		1
Colusa	4	1	5	4	2	6
Contra Costa	4	2	6	6	2	8
Del Norte						
El Dorado	2	4	6		4	4
Fresno	50	32	82	64	42	106
Glenn	1		1			
Humboldt	1	1	2	3	2	5
Inyo						
Kern	38	46	84	38	27	65
Kings				4	5	9
Lake	2	2	4	2	1	3
Lassen						
Los Angeles	61	37	98	81	54	135
Madera	5	2	7			
Marin	10	2	12	7	2	9
Mariposa						
Mendocino	9	10	19	3	3	6
Merced	4	2	6	2	1	3
Modoc						
Mono						
Monterey	20	21	41	43	25	68
Napa	6	3	9	13	6	19
Nevada	16	9	25	17	9	26
Orange	1		1			
Placer	16	7	23	23	13	36
Plumas	11		11	8		8
Riverside				17	2	19
Sacramento	119	54	173	137	69	206
San Benito		1	1		1	1
San Bernardino	2	1	3	2		2
San Diego	3	5	8	4	7	11
San Francisco	1,739	922	2,661	1,673	1,142	2,815
San Joaquin	14	10	24	36	27	63
San Luis Obispo	12	7	19	7	8	15
San Mateo	3		3			
Santa Barbara	5		5	3	1	4
Santa Clara	28	25	53	36	22	58
Santa Cruz	6	7	13	11	12	23
Shasta						
Sierra		1	1		1	1
Siskiyou	13	13	26	14	15	29
Solano	16	4	20	24	11	35
Sonoma	6	3	9	12	8	20
Stanislaus	4	6	10	2	6	8
Sutter				3	5	8
Tehama	8	5	13	13	5	18
Trinity	9	9	18	11	8	19
Tulare	3	3	6	10	17	27
Tuolumne						
Ventura	6	3	9	13	7	20
Yolo	7	3	10	3	1	4
Yuba	16	13	29	28	22	50
Totals	2,341	1,306	3,647	2,516	1,708	4,224

TABLE No. 1—Continued.

Total Number of Census Children; Children who have Attended Public Schools; Children who have Attended Private Schools; and Children who have not Attended any School.

Counties.	Total Number of Census Children.		Number of Children Between Five and Seventeen Years of Age Who Have Attended Public Schools During Year.		Number of Children Between Five and Seventeen Years of Age Who Have Attended Private but not Public Schools at Any Time During Year.		Number of Children Between Five and Seventeen Years of Age Who Have Attended No School at Any Time During the Year.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	35,944	39,708	24,750	27,910	3,681	4,399	7,513	7,399
Alpine	59	82	52	56	----	----	7	26
Amador	2,381	2,386	1,985	1,896	8	33	388	457
Butte	4,937	5,242	3,943	4,234	33	47	961	961
Calaveras	2,635	2,585	2,090	2,067	19	7	526	511
Colusa	1,857	1,764	1,491	1,401	74	61	292	302
Contra Costa	5,095	5,472	3,918	4,146	72	43	1,105	1,283
Del Norte	709	689	547	553	9	3	153	133
El Dorado	1,924	1,878	1,558	1,533	30	17	336	328
Fresno	12,314	13,040	9,786	10,102	291	258	2,237	2,680
Glenn	1,242	1,388	1,009	1,174	16	7	217	207
Humboldt	7,738	7,956	6,101	6,248	75	110	1,562	1,598
Inyo	907	940	683	655	19	32	205	253
Kern	4,356	4,343	3,513	3,500	30	41	813	802
Kings	2,777	2,893	2,173	2,304	79	47	525	542
Lake	1,473	1,560	1,141	1,219	53	47	279	294
Lassen	1,198	1,088	969	851	13	15	216	222
Los Angeles	67,875	75,924	55,116	61,827	4,223	4,397	8,536	9,700
Madera	1,549	1,510	1,183	1,154	12	45	354	311
Marin	4,058	4,111	2,530	2,883	882	533	646	695
Mariposa	872	856	715	657	6	8	151	191
Mendocino	5,214	5,263	3,965	4,068	20	118	1,229	1,077
Merced	2,644	2,869	2,112	2,339	28	9	504	521
Modoc	1,389	1,339	1,067	1,075	1	7	321	257
Mono	423	422	282	267	2	10	139	145
Monterey	4,942	5,011	3,834	3,880	168	161	940	970
Napa	3,334	3,442	2,558	2,617	115	128	661	697
Nevada	3,436	3,473	2,599	2,666	121	101	716	706
Orange	6,760	6,949	5,340	5,607	384	254	1,036	1,088
Placer	3,141	3,076	2,459	2,439	33	26	649	611
Plumas	883	889	677	658	20	27	186	204
Riverside	5,590	5,703	4,493	4,862	161	68	936	773
Sacramento	9,664	10,020	7,355	7,510	727	788	1,582	1,722
San Benito	1,633	1,579	1,235	1,137	117	104	281	338
San Bernardino	9,070	9,535	6,785	7,247	382	423	1,903	1,865
San Diego	8,524	9,100	6,626	7,107	505	597	1,393	1,396
San Francisco	98,178	101,836	58,962	59,971	24,646	24,902	14,570	16,963
San Joaquin	8,027	8,407	6,192	6,417	414	469	1,421	1,521
San Luis Obispo	4,820	4,803	3,748	3,729	155	131	917	943
San Mateo	3,559	3,828	2,622	2,784	256	234	681	810
Santa Barbara	5,175	5,464	3,971	4,261	248	286	956	917
Santa Clara	15,909	16,661	11,510	11,917	1,575	1,702	2,824	3,042
Santa Cruz	5,598	5,788	4,038	4,184	562	505	998	1,099
Shasta	3,925	3,752	3,077	3,006	65	38	783	708
Sierra	805	803	665	675	13	9	127	119
Siskiyou	3,786	3,735	2,968	2,937	41	91	777	707
Solano	5,170	5,440	3,682	3,817	517	532	971	1,091
Sonoma	10,553	10,623	7,915	8,095	500	525	2,138	2,003
Stanislaus	3,078	3,345	2,561	2,791	16	14	501	540
Sutter	1,332	1,363	1,058	1,114	24	7	250	242
Tehama	2,793	2,748	2,158	2,168	124	88	511	492
Trinity	725	701	509	485	11	28	205	188
Tulare	6,132	6,443	4,929	5,245	23	34	1,180	1,164
Tuolumne	2,300	2,276	1,811	1,796	10	31	479	449
Ventura	3,979	3,935	2,968	2,961	239	214	772	760
Yolo	3,076	2,988	2,499	2,413	73	98	504	477
Yuba	1,848	1,893	1,327	1,255	171	171	350	467
Totals	419,315	440,917	305,810	321,870	42,092	43,080	71,413	75,985

TABLE No. 1—Continued.

Number of Children Under Five Years of Age.

Counties.	1905.					1906.				
	White.	Negro.	Indian.	Mongolian.	Total.	White.	Negro.	Indian.	Mongolian.	Total.
Alameda	11,304	96	6	55	11,461	12,088	93	1	130	12,312
Alpine	19				19	20		8		28
Amador	821	1	14	5	841	878	1	11	5	895
Butte	1,668	4	45	11	1,728	1,819	7	27	17	1,870
Calaveras	980		9		989	946		11		957
Colusa	532	3	7		542	380	1	11	2	394
Contra Costa	2,276	6	1	10	2,293	2,393	3		14	2,410
Del Norte	247		28		275	237		41		278
El Dorado	591		35	5	631	569	3	33	7	612
Fresno	5,282	42	33	64	5,421	5,331	37	37	78	5,483
Glenn	411	1	5		417	418		2		420
Humboldt	2,741		108	4	2,853	2,812		95	5	2,912
Inyo	281		32		313	306		49		355
Kern	1,653	14	26	11	1,704	1,651	21	24	32	1,728
Kings	917	6	3	4	930	1,066	6	6	5	1,083
Lake	470		30		500	464	1	46		511
Lassen	417		54		471	376		50		426
Los Angeles	19,331	308	52	45	19,736	22,951	365	50	89	23,455
Madera	548	2	43	2	595	545	3	49		597
Marin	1,194	3		2	1,199	1,372	3		2	1,377
Mariposa	280		24		304	288		19		307
Mendocino	1,904	1	129	12	2,046	2,000		93	3	2,096
Merced	1,065	4		3	1,072	1,136	3	4	3	1,146
Modoc	508		15		523	507		13		520
Mono	108		49		157	80		45		125
Monterey	1,765	5	13	33	1,816	1,811	2	8	56	1,877
Napa	1,183	1	7		1,191	1,176	1		16	1,193
Nevada	1,267		3	14	1,284	1,229		7	12	1,248
Orange	1,976		11		1,987	2,283	11	36		2,330
Placer	1,033		6	11	1,050	1,017		8	11	1,036
Plumas	294		31	7	332	334		41		375
Riverside	1,654	46	37		1,737	1,500	20	42	1	1,563
Sacramento	3,232	26	11	77	3,346	3,366	46	12	111	3,535
San Benito	532	2	4	1	539	519	4	2	2	527
San Bernardino	3,074	15	18	1	3,108	3,228	15	25	1	3,269
San Diego	2,420	8	74	1	2,503	2,662	20	62	2	2,746
San Francisco	19,267	102		76	19,445	21,702	505		1,148	23,355
San Joaquin	2,623	18		11	2,652	2,679	25		15	2,719
San Luis Obispo	1,492	1	7	3	1,503	1,617		6	7	1,630
San Mateo	1,409	3		3	1,415	1,445	2		2	1,449
Santa Barbara	1,933			2	1,935	1,980		1	12	1,993
Santa Clara	4,772	9		45	4,826	4,729	15		75	4,819
Santa Cruz	1,728	1	2	26	1,757	1,884	3	1	40	1,928
Shasta	1,249	7	63		1,319	1,294	11	65		1,370
Sierra	352			2	354	325			2	327
Siskiyou	1,314	1	52	4	1,371	1,292	1	37	11	1,341
Solano	1,763	4		12	1,779	1,731	4		18	1,753
Sonoma	3,510		34	9	3,553	3,588		37	9	3,634
Stanislaus	1,035	11	2	2	1,050	1,110	9	4	2	1,125
Sutter	492			1	493	482			2	484
Tehama	880	6	3	2	891	821	2	7	5	835
Trinity	290		4	3	297	299		11	5	315
Tulare	2,004	2	9	2	2,017	2,179	4	12	11	2,206
Tuolumne	858	1	1		860	861		9		870
Ventura	1,425	5	38	6	1,474	1,339	2	15	7	1,363
Yolo	865	5	2	11	883	924	13	2	13	952
Yuba	495	7	3	8	513	511	15	4	15	545
Totals	123,734	777	1,183	606	126,300	135,550	1,277	1,179	2,003	137,009

TABLE No. 1—Continued.

Nativity of Children.

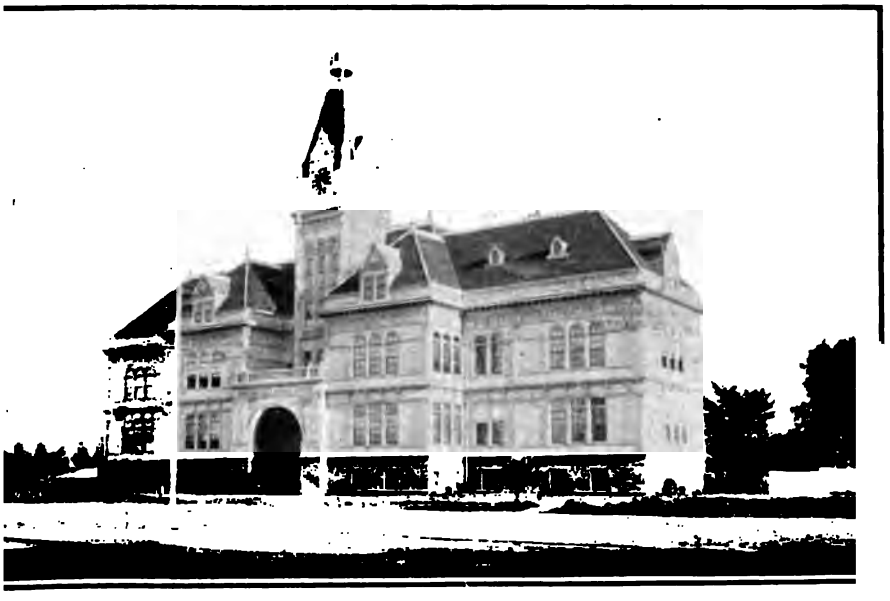
Counties.	Native Born,		Foreign Born.		Total.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	46,253	50,726	1,152	1,294	47,405	52,020
Alpine	74	99	4	11	78	110
Amador	3,109	3,106	113	175	3,222	3,281
Butte	6,614	7,030	51	82	6,665	7,112
Calaveras	3,585	3,523	39	19	3,624	3,542
Colusa	2,380	2,141	19	17	2,399	2,158
Contra Costa	7,163	7,593	225	289	7,388	7,882
Del Norte	982	960	2	7	984	967
El Dorado	2,513	2,449	42	41	2,555	2,490
Fresno	16,836	17,680	899	843	17,735	18,523
Glenn	1,644	1,745	15	63	1,659	1,808
Humboldt	10,399	10,627	192	241	10,591	10,868
Inyo	1,216	1,287	4	8	1,220	1,295
Kern	6,010	6,026	50	45	6,060	6,071
Kings	3,674	3,895	33	81	3,707	3,976
Lake	1,955	2,056	18	15	1,973	2,071
Lassen	1,669	1,514			1,669	1,514
Los Angeles	85,849	96,951	1,762	2,428	87,611	99,379
Madera	2,123	2,074	21	33	2,144	2,107
Marin	5,094	5,382	163	106	5,257	5,488
Mariposa	1,171	1,154	5	9	1,176	1,163
Mendocino	7,123	7,248	137	111	7,260	7,359
Merced	3,622	3,900	94	115	3,716	4,015
Modoc	1,908	1,857	4	2	1,912	1,859
Mono	571	535	9	12	580	547
Monterey	6,692	6,819	66	69	6,758	6,888
Napa	4,429	4,532	96	103	4,525	4,635
Nevada	4,674	4,648	46	73	4,720	4,721
Orange	8,660	9,197	87	82	8,747	9,279
Placer	4,158	4,070	33	42	4,191	4,112
Plumas	1,199	1,247	16	17	1,215	1,264
Riverside	7,235	7,183	92	83	7,327	7,266
Sacramento	12,793	13,247	217	308	13,010	13,555
San Benito	2,131	2,086	41	20	2,172	2,106
San Bernardino	11,826	12,560	352	244	12,178	12,804
San Diego	10,727	11,463	300	383	11,027	11,846
San Francisco	115,847	121,903	1,776	3,288	117,623	125,191
San Joaquin	10,450	10,889	229	237	10,679	11,126
San Luis Obispo	6,236	6,339	87	94	6,323	6,433
San Mateo	4,790	5,146	184	131	4,974	5,277
Santa Barbara	6,975	7,309	135	148	7,110	7,457
Santa Clara	20,193	20,947	542	533	20,735	21,480
Santa Cruz	7,239	7,603	116	113	7,355	7,716
Shasta	5,193	5,083	51	39	5,244	5,122
Sierra	1,154	1,125	5	5	1,159	1,130
Siskiyou	5,094	5,018	63	58	5,157	5,076
Solano	6,823	7,072	126	121	6,949	7,193
Sonoma	13,794	13,963	312	294	14,106	14,257
Stanislaus	4,087	4,425	41	45	4,128	4,470
Sutter	1,818	1,835	7	12	1,825	1,847
Tehama	3,639	3,554	45	29	3,684	3,583
Trinity	1,017	1,008	5	8	1,022	1,016
Tulare	8,077	8,560	72	89	8,149	8,649
Tuolumne	3,131	3,121	29	25	3,160	3,146
Ventura	5,309	5,170	144	128	5,453	5,298
Yolo	3,934	3,911	25	29	3,959	3,940
Yuba	2,356	2,427	5	11	2,361	2,438
Totals	535,217	565,018	10,398	12,908	545,615	577,926

TABLE No. 1—Continued.

Number of Children that are Deaf; Children not Vaccinated.

Counties.	Number of Children Over Five but Not Over Seventeen Years of Age that are Deaf.		Number of Child Over Five but N Over Seventeen Ye of Age that Hav Not Been Vaccinat	
	1905.	1906.	1905.	1906.
Alameda	45	80	6,830	5,8
Alpine			56	
Amador	3	6	573	6
Butte	6	4	2,810	3,0
Calaveras	4	3	1,091	1,04
Colusa	3		1,151	1,10
Contra Costa	1	5	1,835	2,15
Del Norte			586	58
El Dorado	1		1,354	1,28
Fresno	11	11	3,390	3,959
Glenn	1		291	410
Humboldt	8	6	5,064	5,257
Inyo		2	310	360
Kern	3	3	1,191	1,253
Kings	5		826	1,336
Lake			863	712
Lassen			443	423
Los Angeles	76	71	7,692	9,343
Madera	2	2	808	1,076
Marin	1	1	1,409	1,574
Mariposa	1	1	705	715
Mendocino	7	2	3,452	3,476
Merced	2	1	1,678	1,454
Modoc			769	653
Mono			304	277
Monterey		1	3,236	5,383
Napa	2	1	2,262	2,192
Nevada			2,053	1,917
Orange	7	5	3,802	4,328
Placer			1,859	1,900
Plumas			517	523
Riverside	6	1	2,118	2,251
Sacramento	9	10	2,051	2,299
San Benito	2		1,165	1,154
San Bernardino	3	5	2,552	3,038
San Diego	3	2	3,449	3,841
San Francisco	114	162	1,001	1,107
San Joaquin	14	8	3,767	4,295
San Luis Obispo	1		2,914	3,217
San Mateo	3	6	2,335	1,916
Santa Barbara	2	2	1,953	1,906
Santa Clara	16	7	4,485	5,130
Santa Cruz	4	5	2,459	2,309
Shasta	1	3	2,827	2,703
Sierra	1		487	432
Siskiyou	1	3	2,113	2,057
Solano	3	1	1,772	2,063
Sonoma	10	9	4,805	5,364
Stanislaus			1,731	1,788
Sutter		2	845	723
Tehama	1	1	2,037	1,859
Trinity	3	1	489	424
Tulare	4	1	2,716	3,216
Tuolumne	1		1,273	1,370
Ventura	1	2	2,181	2,264
Yolo		1	1,052	1,267
Yuba			852	974
Totals	392	437	114,639	123,210

OVERTON GRAMMAR SCHOOL NEVADA COUNTY.



REDWOOD CITY GRAMMAR SCHOOL—SAN MATEO COUNTY.

PI

TABLE No. 2—PRIMARY AND GRAMMAR SCHOOL STATISTICS.

School Districts.

Counties.	At Beginning of School Year.		New Districts Organized.		Districts Lapsed During Year.		Districts Combined During Year.		Total Number at Close of Year.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	54	54				2			54	52
Alpine	3	3							3	3
Amador	40	41			1				39	41
Butte	75	74	1		1		1		74	74
Calaveras	55	55		1		2			55	54
Colusa	37	36	1				1	1	37	35
Contra Costa	55	55	1		1	1			55	54
Del Norte	16	16	1						17	16
El Dorado	60	60		1					60	61
Fresno	118	123	5	1					123	124
Glenn	33	32		1	1				32	33
Humboldt	103	105	2						105	105
Inyo	20	18			2				18	18
Kern	66	66	2		1		1		66	66
Kings	20	21		2					20	23
Lake	39	40	1	1					40	41
Lassen	34	33		1	1	1			33	33
Los Angeles	138	140	3	7		1		1	141	145
Madera	35	35							35	35
Marin	42	35							42	35
Mariposa	28	31	1						29	31
Mendocino	120	120	4	5	3	1			121	124
Merced	57	57							57	57
Modoc	34	34							34	34
Mono	9	9		1					9	10
Monterey	94	91			1		2		91	91
Napa	50	50							50	50
Nevada	43	44	1	1				1	44	44
Orange	43	44	1	1					44	45
Placer	57	57						1	57	56
Plumas	27	26							27	26
Riverside	66	62	1		3	1	2		62	61
Sacramento	72	70		1	3				69	71
San Benito	41	42	2				1		42	42
San Bernardino	52	53		4		1			52	56
San Diego	124	127	4	2	2	1		1	126	127
San Francisco	1	1							1	1
San Joaquin	85	84	1	1	1				85	85
San Luis Obispo	94	90	1	3	2	1			93	92
San Mateo	33	32							33	32
Santa Barbara	62	59	1	1					60	60
Santa Clara	82	82	1	1				2	83	81
Santa Cruz	52	53	1						53	53
Shasta	104	107	3	1					107	108
Sierra	20	20				1			20	19
Siskiyou	85	85	2		2				85	85
Solano	51	53	2						53	53
Sonoma	136	139	3	2		2			139	139
Stanislaus	55	54	2	2			1		56	56
Sutter	34	34							34	34
Tehama	63	59			3				60	59
Trinity	23	23							23	23
Tulare	104	102		1	2	1			102	102
Tuolumne	37	37							37	37
Ventura	49	49	1		1				49	49
Yolo	48	48	1						48	48
Yuba	38	39				1			39	38
Totals	3,216	3,209	50	42	34	17	9	7	3,223	3,227

TABLE No. 2—Continued.

Grade of School.

Counties.	Grammar.		Primary	
	1905.	1906.	1905.	1906.
Alameda	196	203	227	236
Alpine	3	3		3
Amador	33	31	30	31
Butte	51	57	23	17
Calaveras	53	49	15	17
Colusa	29	34	23	17
Contra Costa	61	70	35	32
Del Norte	13	14	6	5
El Dorado	23	43	40	23
Fresno	118	122	8	10
Glenn	24	32	21	9
Humboldt	25	26	78	79
Inyo	14	14	4	4
Kern	67	66		
Kings	31	29	21	27
Lake	39	41	1	
Lassen	30	30	7	6
Los Angeles	502	559	562	625
Madera	35	35		
Marin	47	53	27	23
Mariposa	30	28	3	4
Mendocino	102	121	18	
Merced	57	56	1	
Modoc	31	34	10	7
Mono	8	9	1	
Monterey	83	80	48	48
Napa	38	45	12	5
Nevada	52	54	25	23
Orange	70	75	64	61
Placer	60	54	23	28
Plumas	27	26	3	2
Riverside	13	42	49	19
Sacramento	93	112	120	103
San Benito	28	32	24	21
San Bernardino	67	71	110	125
San Diego	96	134	25	65
San Francisco	33	27	46	43
San Joaquin	75	66	22	17
San Luis Obispo	84	90	8	3
San Mateo	42	42	24	25
Santa Barbara	38	53	72	64
Santa Clara	162	165	122	118
Santa Cruz	71	74	47	40
Shasta	90	95	35	31
Sierra	14	10	10	9
Siskiyou	73	80	12	5
Solano	73	82	39	32
Sonoma	102	104	36	33
Stanislaus	53	56	2	
Sutter	33	35	8	6
Tehama	66	65	13	13
Trinity	5	5	20	20
Tulare	95	100	9	2
Tuolumne	41	39	13	15
Ventura	56	59	32	30
Yolo	34	41	43	36
Yuba	37	42	10	7
Totals	3,526	3,814	2,287	2,221

TABLE No. 2—Continued.

Teachers.

Counties.	No. Allowed on Census of each School District		No. Regular and Special Teachers including Principals, in Primary and Grammar Schools.		Sex of Teachers, Primary and Grammar Schools.			
					Men.		Women.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	533.00	584.00	583	627	54	52	529	575
Alpine	3.00	3.00	3	3	------	------	3	3
Amador	58.38	58.47	63	61	7	7	56	54
Butte	115.67	119.52	116	122	17	16	99	106
Calaveras	70.25	67.52	68	66	15	15	53	51
Colusa	50.05	49.01	52	52	12	12	40	40
Contra Costa	98.00	102.00	96	102	13	13	83	89
Del Norte	20.00	19.00	19	19	4	4	15	15
El Dorado	66.17	66.82	69	66	12	8	57	58
Fresno	238.34	245.16	266	287	37	43	229	244
Glenn	38.52	40.66	45	41	10	12	35	29
Humboldt	164.00	168.00	165	168	30	29	135	139
Inyo	23.00	22.00	22	21	2	4	20	17
Kern	104.00	103.00	106	112	17	16	89	96
Kings	49.95	50.56	53	56	7	10	46	46
Lake	46.34	48.33	45	46	8	9	37	37
Lassen	35.00	36.00	37	36	15	13	22	23
Los Angeles	1030.35	1140.35	1,142	1,279	100	115	1,042	1,164
Madera	43.18	43.20	45	45	9	9	36	36
Marin	73.44	77.26	74	76	4	3	70	73
Mariposa	32.19	31.26	33	32	5	5	28	27
Mendocino	151.66	154.19	146	147	25	25	121	122
Merced	73.76	76.89	76	76	11	7	65	69
Modoc	41.00	40.00	41	41	6	9	35	32
Mono	11.00	12.00	12	12	2	2	10	10
Monterey	126.74	127.45	132	133	10	7	122	126
Napa	75.34	77.31	79	79	6	6	73	73
Nevada	76.00	77.00	77	77	11	12	66	65
Orange	113.00	119.00	136	142	27	23	109	119
Placer	80.43	77.41	83	82	14	13	69	69
Plumas	28.00	28.00	30	28	------	3	30	25
Riverside	116.73	116.74	123	127	15	13	108	114
Sacramento	178.01	180.41	219	215	11	11	208	204
San Benito	53.75	53.96	52	52	5	7	47	45
San Bernardino	154.48	165.40	189	200	20	19	169	181
San Diego	199.79	210.86	216	226	29	30	187	196
San Francisco	1406.00	1458.00	1,059	986	69	41	990	945
San Joaquin	159.34	164.14	169	177	25	23	144	154
San Luis Obispo	123.00	126.00	121	124	16	15	105	109
San Mateo	66.09	69.16	70	70	10	9	60	61
Santa Barbara	103.41	108.30	110	117	13	13	97	104
Santa Clara	264.48	273.73	295	298	27	21	268	277
Santa Cruz	107.94	109.70	118	114	9	11	109	103
Shasta	127 00	125.00	125	126	11	11	114	115
Sierra	24.00	24.00	24	23	6	5	18	18
Siskiyou	108.00	105.00	105	104	27	31	78	73
Solano	103.68	108.64	112	114	14	11	98	103
Sonoma	217.90	216.55	217	223	20	23	197	200
Stanislaus	74.12	76.89	81	82	11	13	70	69
Sutter	40.00	41.00	41	41	12	10	29	31
Tehama	78.79	76.80	79	80	7	5	72	75
Trinity	25.00	24.00	25	25	2	2	23	23
Tulare	143.00	146.40	154	155	22	27	132	128
Tuolumne	54.00	54.00	54	54	6	7	48	47
Ventura	80.24	78.35	88	89	13	13	75	76
Yolo	72.29	71.34	77	77	7	5	70	72
Yuba	53.20	53.26	47	49	8	9	39	40
Totals	7804.00	8100.00	7,884	8,082	905	887	6,979	7,196

TABLE No. 2—Continued.

Number of Teachers Attending Institute. (Includes All in County.)

Counties.	From Kindergarten Schools.		From Primary and Grammar Schools.		From High Schools.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	2	2	576	618	96	108
Alpine						
Amador			62	61	3	2
Butte			107	119	10	11
Calaveras			68	65		4
Colusa			50	52	6	3
Contra Costa			96	100	15	18
Del Norte			19	17	3	3
El Dorado			66	63		2
Fresno	1		262	254	32	35
Glenn			42	39	6	6
Humboldt			164	168	14	14
Inyo				21		2
Kern			102	106	6	8
Kings			53	56	11	11
Lake			43	45	4	4
Lassen			34	36	3	2
Los Angeles	97	103	1,097	1,224	170	226
Madera			42	41	4	4
Marin			73	74	5	5
Mariposa			27	28		
Mendocino			135	141	18	20
Merced			76	76	8	9
Modoc			36	40	4	6
Mono						
Monterey			132	129	13	14
Napa			79	78	7	9
Nevada			75	75	10	11
Orange	2	2	136	142	36	41
Placer			82	82	5	5
Plumas			25	28		
Riverside	2	2	120	125	24	29
Sacramento	16	8	212	114	17	14
San Benito			52	51	4	5
San Bernardino		2	187	199	37	41
San Diego	7	6	206	222	32	33
San Francisco		83	941	949	122	113
San Joaquin			166	170	17	17
San Luis Obispo			118	119	3	10
San Mateo			61	69	10	12
Santa Barbara	5	11	107	114	22	22
Santa Clara		3	281	279	52	55
Santa Cruz	2	1	113	113	15	17
Shasta			124	126	6	6
Sierra				21		
Siskiyou			96	86	8	8
Solano			112	106	20	21
Sonoma			216	209	24	26
Stanislaus			72	80	7	7
Sutter			41	40	3	3
Tehama		1	76	77	10	11
Trinity			22	24		
Tulare			152	153	17	21
Tuolumne				27		4
Ventura			87	87	17	17
Yolo		1	76	70	9	11
Yuba	1		43	47	4	4
Totals	135	225	7,440	7,657	969	1,092

TABLE No. 2—Continued.

Grade of Certificates of Teachers. (Includes all Teachers Employed in County.)

Counties.	Kindergarten.		Special.		Primary.		Grammar School.		High School.		Total.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906	1905	1906.
Alameda	2		41	51	12	8	481	513	146	168	682	740
Alpine							3	3			3	3
Amador							61	66	5	4	66	64
Butte			1				110	121	15	14	126	135
Calaveras							67	66	1	4	68	70
Colusa					2	1	47	49	9	10	58	60
Contra Costa					5	5	82	92	24	23	111	120
Del Norte							19	19	3	3	22	22
El Dorado					8	2	61	64		2	69	68
Fresno	1	1	3	3	4	2	249	267	42	52	299	325
Glenn					5	3	10	38	6	6	51	47
Humboldt					38	32	124	127	17	23	179	182
Inyo							22	21	2	2	24	23
Kern			3	4			101	107	9	10	113	121
Kings			1	2			50	55	13	10	64	67
Lake					1		43	46	5	4	49	50
Lassen					1	1	36	35	3	3	40	37
Los Angeles	106	109	41	86	24	21	1,006	1,132	254	268	1,431	1,616
Madera							43	42	6	7	49	49
Marin			1	1	3	3	68	71	7	7	79	82
Mariposa							33	32			33	32
Mendocino			3	1			143	143	17	25	163	169
Merced							73	73	11	12	84	85
Modoc							38	40	7	7	45	47
Mono							11	11	1	1	12	12
Monterey				2	6	6	120	121	19	18	145	147
Napa					3	3	70	69	13	16	86	88
Nevada					1	3	74	74	12	12	87	89
Orange	2	2	5	5	3	1	125	132	39	45	174	185
Placer							78	78	10	9	88	87
Plumas							30	28			30	28
Riverside	2	2		1	18	8	101	109	28	38	149	158
Sacramento	16	16	6	6			213	209	17	18	252	249
San Benito					5	4	45	46	6	7	56	57
San Bernardino		2	3	4	18	10	151	174	54	53	226	243
San Diego	7	6	1	1	12	3	190	208	45	47	255	265
San Francisco		3	36	52	37	34	891	934	217	203	1,181	1,226
San Joaquin			2	3			163	173	21	18	186	194
San Luis Obispo			1	1	3	1	105	111	23	22	132	135
San Mateo			3	2	2	2	60	62	15	16	80	82
Santa Barbara	6	7	7	9	5	5	100	106	21	25	139	152
Santa Clara			12	12	11	11	263	271	61	67	347	361
Santa Cruz	2	2	2	2	3	2	96	95	30	34	133	135
Shasta			1	2			113	124	17	6	131	132
Sierra							24	23			24	23
Siskiyou					9	2	92	102	12	8	113	112
Solano			1	1	6	5	91	93	34	36	132	135
Sonoma					22	22	172	187	47	40	241	249
Stanislaus							72	79	16	10	88	89
Sutter							40	41	4	3	44	44
Tehama						1	78	80	11	11	89	92
Trinity					2	2	22	21	1	2	25	25
Tulare				1	1	1	150	150	22	24	173	176
Tuolumne							54	54	3	4	57	58
Ventura			1	1	1		85	88	18	17	105	106
Yolo	1	1					76	76	10	12	87	89
Yuba							46	48	5	5	51	53
Totals	145	151	175	253	271	204	7,001	7,393	1,434	1,491	9,026	9,492

TABLE No. 2—Continued.

Number of Teachers Employed in—

Counties.	Kindergartens.		Primary and Grammar Schools		High Schools.		Total.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	2	2	583	627	97	111	682	740
Alpine			3	3			3	3
Amador			63	61	3	3	66	64
Butte			116	122	10	13	126	135
Calaveras			68	66		4	68	70
Colusa			52	52	6	8	58	60
Contra Costa			96	102	15	18	111	120
Del Norte			19	19	3	3	22	22
El Dorado			69	66		2	69	68
Fresno	1	1	286	287	32	37	299	325
Glenn			45	41	6	6	51	47
Humboldt			165	168	14	14	179	182
Inyo			22	21	2	2	24	23
Kern			106	112	7	9	113	121
Kings			53	56	11	11	64	67
Lake			45	46	4	4	49	50
Lassen			37	36	3	3	40	39
Los Angeles	106	109	1,142	1,279	183	226	1,431	1,614
Madera			45	45	4	4	49	49
Marin			74	76	5	6	79	82
Mariposa			33	32			33	32
Mendocino			146	147	17	22	163	169
Merced			76	76	8	9	84	85
Modoc			41	41	4	6	45	47
Mono			12	12			12	12
Monterey			132	133	13	14	145	147
Napa			79	79	7	9	86	88
Nevada			77	77	10	12	87	89
Orange	2	2	136	142	36	41	174	185
Placer			83	82	5	5	88	87
Plumas			30	28			30	28
Riverside	2	2	123	127	24	29	149	158
Sacramento	16	16	219	215	17	18	252	249
San Benito			52	52	4	5	56	57
San Bernardino		2	189	200	37	41	226	243
San Diego	7	6	216	226	32	33	255	265
San Francisco		1	1,059	986	122	128	1,181	1,115
San Joaquin			169	177	17	17	186	194
San Luis Obispo			121	124	11	11	132	135
San Mateo			70	70	10	12	80	82
Santa Barbara	6	7	110	117	23	23	139	147
Santa Clara			295	298	52	60	347	358
Santa Cruz	2	2	118	114	13	19	133	135
Shasta			125	126	6	6	131	132
Sierra			24	23			24	23
Siskiyou			105	104	8	8	113	112
Solano			112	114	20	21	138	135
Sonoma			217	223	24	26	241	249
Stanislaus			81	82	7	7	88	89
Sutter			41	41	3	3	44	44
Tehama		1	79	80	10	11	89	92
Trinity			25	25			25	25
Tulare			154	155	19	21	173	176
Tuolumne			54	54	3	4	57	58
Ventura			88	89	17	17	105	106
Yolo	1	1	77	77	9	11	87	89
Yuba			47	49	4	4	51	53
Totals	145	152	7,884	8,082	997	1,137	9,026	9,371

TABLE No. 2—Continued.

Number of Teachers in Primary and Grammar Schools who are Graduates of California State Normal Schools.

Counties.	Chico.		Los Angeles		San Diego.		S. Francisco.		San José	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906	1905.	1906.
Alameda	14	14	11	8		4	64	58	111	137
Alpine	1									
Amador		1					1	1	4	5
Butte	51	57							4	4
Calaveras		1							6	6
Colusa	9	13	1			1			9	8
Contra Costa	1	2					5	8	36	40
Del Norte							1	1	2	2
El Dorado		1	2	3	1		5	8	38	37
Fresno	6	8	1	5		1	9	5	67	77
Glenn	13	17							5	3
Humboldt	1			1					47	53
Inyo			2	1					3	2
Kern	5	3	5	7	3		8	6	25	24
Kings			2	2	2	3	2	4	32	32
Lake									12	15
Lassen	2	2								3
Los Angeles	8	8	506	587	36	41	16	16	51	62
Madera	1	1	1				1	1	14	10
Marin		1					15	17	19	19
Mariposa				2			4	2	12	7
Mendocino	2	5	2				1	1	39	43
Merced	1	1					1	3	13	21
Modoc	2	1				1			2	4
Mono								2	4	3
Monterey	1	1		1			1	2	77	75
Napa	2	7					3	9	1	11
Nevada		1					1		18	20
Orange	1		56	47	16	15	1	1	6	2
Placer	4	7							10	13
Plumas		1								1
Riverside		1	27	19	6	6	1	1	2	3
Sacramento	15	17					3	2	28	30
San Benito									15	15
San Bernardino	3		45	66	2	7	2	1	8	7
San Diego	4	4	10	18	48	87	1			2
San Francisco	5	7	3	4		1	39	51	50	63
San Joaquin	5	6					5	5	29	41
San Luis Obispo	1	2	3	6	1	1	4	3	70	52
San Mateo							2	2	15	17
Santa Barbara	1	2	7	16	10	8		1	9	10
Santa Clara	1	1							230	249
Santa Cruz	2	4	1	2			2	2	48	46
Shasta	24	32		1			2	3	4	5
Sierra	3	3							4	6
Siskiyou	32	33	1	4				3	15	21
Solano	9	7		1	1		3	2	32	29
Sonoma	7	14	1			3	13	19	26	38
Stanislaus	1	1		1			2	4	17	19
Sutter	8	10					1	1	6	2
Tehama	28	27							2	3
Trinity	7	5							6	4
Tulare	1		8	11	2		4	1	43	40
Tuolumne									3	3
Ventura	1	2	22	21	9	9	1	2	13	17
Yolo	3	6					1		20	18
Yuba	6	6					1		5	2
Totals	292	343	717	834	138	188	226	248	1,367	1,478

TABLE No. 2—Continued.

Number of Teachers who are Graduates of State Normal Schools of Other States and of Universities of This and Other States.

Counties.	Number of Teachers who are Graduates of State Normal Schools of Other States.		Number of Teachers who are Graduates of the University of California.		Number of Teachers who are Graduates of Stanford University.		Number of Teachers who are Graduates of Universities on the Accredited List of the State Board of Education.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	19	23	117	130	23	17	18	22
Alpine		3					1	
Amador	1		4	3			1	
Butte	1	2	8	10	1	1	2	2
Calaveras				1				
Colusa			3	5	3	3		
Contra Costa	4	2	9	5	2	3		
Del Norte			3	3				
El Dorado			3	1	1	1	1	
Fresno	16	18	20	24	15	14	3	2
Glenn			2	2			1	2
Humboldt			4	4	3	5		1
Inyo	2	4	1	2	1			3
Kern	7	9	2	4	2	2	1	
Kings	14	2	6	5	3	2	3	3
Lake	3	2	1	1	2	1		1
Lassen		2	1		2	2		1
Los Angeles	214	242	81	86	50	72	34	44
Madera	3	2	1	3	5	4		
Marin	2		6	8				
Mariposa			3	3	3			
Mendocino	1		12	6	3	1	2	
Merced	5	3	6	7	4	4	3	
Modoc			5	5	2	2		1
Mono	2	1		1	2			
Monterey	4	5	5	5	13	9	1	3
Napa		3	5	10		4	2	3
Nevada			8	9	1	2	1	1
Orange	16	68	13	17	12	9	3	10
Placer	2		5	8		1	2	3
Plumas	8	3					2	2
Riverside	12	19	9	11	8	12	8	7
Sacramento	1	1	13	10	3	4	1	
San Benito			3	3	3	3	1	
San Bernardino	29	29	15	7	17	16	4	8
San Diego	10	15	17	14	7	14	6	10
San Francisco	8	17	101	103	16	21	5	7
San Joaquin	3		10	8	8	8		
San Luis Obispo	4	8	16	16	8	5	2	1
San Mateo			5	4	6	9		1
Santa Barbara	9	13	16	12	8	8	4	3
Santa Clara	3	3	11	9	26	31	8	2
Santa Cruz	2	2	9	15	5	4	3	3
Shasta	2	3	4	6	1		12	2
Sierra	1	2	1	1				
Siskiyou	3	4	10	9	3	2		3
Solano	1	3	20	22	7	7	2	4
Sonoma	3	12	23	25	17	15	1	5
Stanislaus		2	5	9	3	3	1	2
Sutter	3	1	3	4				
Tehama	1	1	7	10	1	1		
Trinity			1	3	1			
Tulare	14	18	20	14	6	9	6	6
Tuolumne	1	2	2	1	1	3		
Ventura	8	8	5	7	8	7	5	8
Yolo	1	1	1	10				2
Yuba	1		3	3			1	1
Totals	444	558	664	704	316	341	151	179

TABLE No. 2—Continued.

Teachers' Certificates.

Counties.	Number Granted on Examination to—				Number Granted on Credentials to—			
	1905.		1906.		1905.		1906.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Alameda	2	14	1	5	23	140	14	107
Alpine		1						2
Amador	1	3	1	12		8	1	1
Butte					6	26	4	24
Calaveras		5	1	6	2	3		4
Colusa	3	11	1	9	6	14	4	10
Contra Costa		1			3	29	3	20
Del Norte	1			2				
El Dorado	2	11		9	2	15	4	8
Fresno	3	9	1	12	13	52	14	62
Glenn	1			3	1	12	2	7
Humboldt		7	1	9	3	5	1	5
Inyo	1	3		3		1	1	3
Kern		2	1	2	3	16	4	31
Kings				1	3	7	3	
Lake			2	3	4	7	1	3
Lassen	2	4	3			3	1	1
Los Angeles	2	13	6	18	41	295	41	377
Madera	1	2		2	2	16	2	10
Marin		1		1		14	1	14
Mariposa		3		1	2	11	1	7
Mendocino			1	10	8	22	6	41
Merced	1	4		15		18	3	17
Modoc	3	3	2	2		8	1	6
Mono						2	1	
Monterey	1	2		2	8	50	5	43
Napa				1	4	14	2	30
Nevada		3	1	2		3		4
Orange					10	49	11	39
Placer		4	1	3	2	17	4	13
Plumas	1	2		5	1	10		6
Riverside	1	4	1	14	2	20	8	51
Sacramento	1	12	4	15	2	44	2	60
San Benito	1	10	1	4	1	12		6
San Bernardino	2	11	1	10	10	34	8	42
San Diego	3	5	3	6	6	15		14
San Francisco	13	15	1	6	15	94	14	83
San Joaquin	1	10	2	9		20		18
San Luis Obispo	1			2	5	43	6	55
San Mateo					2	12	3	22
Santa Barbara	1	5	1	8	9	34	4	32
Santa Clara		4		5	12	65	17	84
Santa Cruz	2	3		3	3	21	13	28
Shasta	1	6		5	7	11	1	22
Sierra				3	2	6	2	12
Siskiyou	1		1	4	7	11	5	26
Solano		4	1	6	4	28	3	27
Sonoma				7	5	51	11	50
Stanislaus		1			2	5	5	20
Sutter			1	1	2	3	1	8
Tehama		7		3	2	9	7	2
Trinity		2		1		10		8
Tulare		7	1	6	5	32	4	34
Tuolumne	1	1	2	7				
Ventura	1	12	1	13	6	41	2	37
Yolo		2		1	1	9		7
Yuba	1	9	2	13	3	4	2	6
Totals	56	234	46	289	260	1,501	254	1,650

TABLE No. 2—Continued.

Teachers' Certificates.

Counties.	Number Renewed.		Number of Applicants Rejected.				Fees Collected for Examination and for the Issuance of Certificates.	
			On Examination.		On Credentials.			
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	38	37	4	8	5	2	$336	$268
Alpine	6	1					2	6
Amador	20	9	5	6			50	60
Butte	5	2	2	6		1	30	46
Calaveras	8	2	6	5		1	22	32
Colusa	8	6	10	13			84	72
Contra Costa	4	3	4	3	1		58	22
Del Norte			1				4	4
El Dorado				2	3		52	46
Fresno	7	25	19	10			150	160
Glenn	4	6	5	1			36	26
Humboldt	18	8	23	36			76	120
Inyo	2	1	1				14	16
Kern	5	4	1		2	1	54	76
Kings	2	3	2	4	4		28	22
Lake	4		6	7			30	32
Lassen	3	3	6	6			30	28
Los Angeles	35	68	26	9	5		580	780
Madera	2	2	8	9	1		40	42
Marin		1		2	1		30	34
Mariposa	1						34	18
Mendocino	3	7	1	3			36	86
Merced	9	4	2	13			52	88
Modoc	2	1	4	4	1		36	30
Mono	1	1		1			6	4
Monterey	20	20					162	140
Napa	10	5	6	2			58	54
Nevada	4	7		1			20	26
Orange			4	4			126	108
Placer	2	1	1	7			44	48
Plumas	6	3	1	3			18	16
Riverside	5	5	5	8	6	7	52	136
Sacramento			8	12			84	162
San Benito	6	2	4	3			46	38
San Bernardino	4	10	9	4			108	70
San Diego	13	6	2	1		1	119	94
San Francisco	108	54	19	21			450	358
San Joaquin	11	17	13	12			110	126
San Luis Obispo		7	7	7	1	3	108	154
San Mateo		4					28	62
Santa Barbara	5		7	6			120	86
Santa Clara	14	16		1	10	6	102	142
Santa Cruz	11	3		4			26	44
Shasta	12	4	12	8		5	98	80
Sierra	10	2	2				22	18
Siskiyou	8	9	2	2			22	28
Solano	20	12	9	7			130	112
Sonoma	44	50		6	2	2	136	238
Stanislaus	1	2		13	10		38	58
Sutter	11	6	1	2			18	16
Tehama	9	10	12	1			60	14
Trinity	3	1	1	3			20	26
Tulare	3	3		11			36	42
Tuolumne	7	9		2			4	22
Ventura	1		9	18	4		86	86
Yolo	3	3	2	1			26	24
Yuba	2	3	3	3	1		36	56
Totals	535	468	275	321	54	29	$4,374	$4,802

TABLE No. 2—Continued.

Attendance at School.

Counties.	Average Number Belonging to Grammar and Primary Schools.		Average Daily Attendance in Grammar and Primary Schools.		Percentage of Attendance of Average Number Belonging.	
	1905.	1906.	1905.	1906.	1905.	19
Alameda	21,128	21,516	19,575	20,386	95	
Alpine	44	41	42	37	92	
Amador	1,558	1,515	1,451	1,405	93	
Butte	3,028	3,194	2,840	2,972	94	
Calaveras	1,666	1,621	1,530	1,504	92	
Colusa	1,271	1,198	1,207	1,132	94	
Contra Costa	3,127	3,310	2,915	3,089	93	
Del Norte	426	430	400	397	94	
El Dorado	1,237	1,212	1,151	1,126	93	
Fresno	8,001	8,544	7,632	8,153	95	
Glenn	880	886	826	825	94	
Humboldt	4,842	4,865	4,576	4,589	94	
Inyo	481	502	450	474	94	
Kern	2,685	2,716	2,502	2,581	94	
Kings	1,682	1,843	1,605	1,670	95	
Lake	873	899	815	834	93	
Lassen	727	674	662	630	91	
Los Angeles	39,101	43,643	37,044	41,260	95	
Madera	975	924	921	870	95	
Marin	2,006	2,103	1,909	2,002	95	
Mariposa	557	516	519	484	93	
Mendocino	2,885	3,081	2,706	2,890	93	
Merced	1,713	1,745	1,606	1,621	93	
Modoc	866	829	812	779	94	
Mono	192	181	182	175	94	
Monterey	3,017	3,039	2,849	2,961	94	
Napa	2,188	2,207	2,083	2,091	95	
Nevada	2,105	2,150	2,012	2,051	96	
Orange	4,237	4,388	4,027	4,140	95	
Placer	2,082	1,928	1,937	1,800	93	
Plumas	527	489	490	457	93	
Riverside	3,443	3,497	3,255	3,307	95	
Sacramento	6,250	6,376	5,848	5,948	93	
San Benito	987	916	926	864	93	
San Bernardino	5,359	5,715	5,092	5,422	94	
San Diego	4,951	5,311	4,656	4,986	94	
San Francisco	38,864	37,202	36,850	35,753	95	
San Joaquin	5,035	5,280	4,762	4,959	94	
San Luis Obispo	2,839	2,879	2,632	2,678	92	
San Mateo	1,953	2,070	1,862	1,972	96	
Santa Barbara	3,133	3,238	2,966	2,930	94	
Santa Clara	9,128	9,206	8,660	8,945	95	
Santa Cruz	2,935	3,065	2,784	2,910	95	
Shasta	2,427	2,319	2,269	2,159	94	
Sierra	589	597	556	559	94	
Siskiyou	2,226	2,127	2,106	2,004	95	
Solano	2,974	2,908	2,819	2,775	95	
Sonoma	6,040	6,157	5,645	5,750	93	
Stanislaus	2,107	2,295	1,998	2,186	93	
Sutter	948	949	907	896	95	
Tehama	1,635	1,661	1,536	1,539	94	
Trinity	382	356	355	330	93	
Tulare	3,994	4,213	3,800	4,021	95	
Tuolumne	1,453	1,433	1,379	1,362	95	
Ventura	2,218	2,298	2,087	2,158	94	
Yolo	2,030	2,057	1,927	1,956	95	
Yuba	998	981	929	906	93	
Totals	230,951	295,295	217,873	224,660	94	

TABLE No. 2—Continued.

State Enrollment by Grades and by Sex.

Counties.	Primary Schools.				Grammar Schools.			
	1905.		1906.		1905.		1906.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Alameda	8,880	8,259	9,949	8,827	3,630	4,037	3,987	4,414
Alpine	18	21	9	15	9	18	7	12
Amador	765	692	735	668	197	210	177	202
Butte	1,430	1,314	1,476	1,296	530	592	570	675
Calaveras	792	668	730	630	310	371	306	335
Colusa	555	466	454	395	231	214	300	248
Contra Costa	1,331	1,215	1,388	1,302	649	677	720	745
Del Norte	156	212	174	196	78	96	82	103
El Dorado	558	525	514	502	212	224	260	257
Fresno	3,835	3,482	4,048	3,723	1,050	1,142	1,170	1,231
Glenn	339	362	345	332	185	138	172	182
Humboldt	2,156	2,022	2,151	1,966	842	914	904	966
Inyo	208	205	157	169	110	107	139	153
Kern	1,168	1,127	1,197	1,064	506	512	505	545
Kings	698	624	680	682	356	361	372	366
Lake	354	335	360	320	202	226	240	236
Lassen	270	283	286	277	177	156	147	132
Los Angeles	15,610	13,904	17,307	15,773	8,804	9,299	9,873	10,349
Madera	436	368	446	370	170	207	170	208
Marin	863	803	866	772	417	432	466	521
Mariposa	231	201	233	189	143	152	141	146
Mendocino	1,304	1,181	1,303	1,183	665	742	751	764
Merced	665	620	683	615	391	381	401	397
Modoc	343	305	370	297	231	227	202	212
Mono	83	75	66	61	52	43	56	55
Monterey	1,307	1,101	1,256	1,078	641	695	735	760
Napa	872	782	923	830	488	492	466	433
Nevada	829	700	858	726	469	474	452	453
Orange	1,712	1,600	1,738	1,581	981	915	1,041	1,014
Placer	739	706	713	650	482	506	461	520
Plumas	188	197	198	181	134	140	118	137
Riverside	1,423	1,235	1,387	1,251	719	701	799	750
Sacramento	2,836	2,369	2,726	2,333	1,173	1,259	1,229	1,363
San Benito	450	412	403	354	173	195	186	188
San Bernardino	2,236	1,986	2,343	2,116	1,159	1,210	1,175	1,223
San Diego	2,181	1,899	2,116	1,937	1,022	1,073	1,357	1,360
San Francisco	16,648	14,133	12,501	13,867	10,810	9,379	8,910	12,563
San Joaquin	2,125	1,927	2,227	1,983	997	1,147	1,112	1,188
San Luis Obispo	1,279	1,086	1,257	1,052	589	626	680	679
San Mateo	771	619	1,038	790	608	468	418	378
Santa Barbara	1,627	1,386	1,406	1,382	315	393	481	536
Santa Clara	3,504	3,087	3,528	3,111	2,229	2,111	2,191	2,229
Santa Cruz	1,228	1,132	1,288	1,179	628	678	695	717
Shasta	944	877	982	836	626	663	600	657
Sierra	222	231	219	237	124	162	118	158
Siskiyou	912	869	950	876	594	555	504	555
Solano	1,214	935	1,206	921	734	728	710	676
Sonoma	2,846	2,578	2,922	3,562	1,189	1,217	1,189	1,277
Stanislaus	851	700	856	751	421	435	511	502
Sutter	379	281	366	301	219	231	222	210
Tehama	732	660	698	638	327	365	404	406
Trinity	233	176	206	180	63	81	58	74
Tulare	1,463	1,314	1,568	1,343	940	967	1,014	1,033
Tuolumne	520	500	548	519	364	389	393	351
Ventura	1,037	954	978	933	455	424	468	462
Yolo	799	815	751	727	348	432	414	510
Yuba	400	345	397	327	238	233	275	510
Totals	97,575	86,861	96,230	90,218	50,406	50,822	51,444	57,057

TABLE No. 2—Continued.

Total Enrollment in all Grades of the Primary and Grammar Schools.

Counties.	Boys.		Girls.		Total.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	12,510	13,436	12,296	13,241	24,806	26,677
Alpine	27	16	39	27	66	43
Amador	962	912	902	870	1,864	1,782
Butte	1,960	2,046	1,906	1,971	3,866	4,017
Calaveras	1,102	1,036	1,039	965	2,141	2,001
Colusa	786	754	680	643	1,466	1,397
Contra Costa	1,980	2,108	1,892	2,047	3,872	4,155
Del Norte	234	256	308	299	542	555
El Dorado	770	774	749	759	1,519	1,533
Fresno	4,885	5,218	4,624	4,954	9,509	10,172
Glenn	524	517	500	514	1,024	1,031
Humboldt	3,018	3,055	2,936	2,932	5,954	5,987
Inyo	318	296	312	322	630	618
Kern	1,674	1,702	1,639	1,609	3,313	3,311
Kings	1,054	1,052	985	1,048	2,039	2,100
Lake	556	600	561	566	1,117	1,166
Lassen	447	433	439	409	886	842
Los Angeles	24,414	27,180	23,203	26,122	47,617	53,302
Madera	606	616	575	578	1,181	1,194
Marin	1,280	1,332	1,235	1,293	2,515	2,625
Mariposa	374	374	353	335	727	709
Mendocino	1,969	2,054	1,923	1,947	3,892	4,001
Merced	1,056	1,084	1,001	1,042	2,057	2,126
Modoc	574	572	532	509	1,106	1,081
Mono	135	122	118	116	253	238
Monterey	1,948	1,991	1,796	1,838	3,744	3,829
Napa	1,360	1,389	1,274	1,263	2,634	2,652
Nevada	1,298	1,310	1,174	1,179	2,472	2,489
Orange	2,693	2,779	2,515	2,595	5,208	5,374
Placer	1,221	1,174	1,212	1,170	2,433	2,344
Plumas	322	316	337	318	659	634
Riverside	2,142	2,186	1,936	2,001	4,078	4,187
Sacramento	4,009	3,955	3,628	3,696	7,637	7,651
San Benito	623	589	607	542	1,230	1,131
San Bernardino	3,395	3,518	3,196	3,339	6,591	6,857
San Diego	3,203	3,523	2,972	3,299	6,175	6,822
San Francisco	27,458	21,411	23,512	26,430	50,970	47,841
San Joaquin	3,122	3,339	3,074	3,171	6,196	6,510
San Luis Obispo	1,868	1,937	1,712	1,731	3,580	3,668
San Mateo	1,379	1,456	1,087	1,168	2,466	2,624
Santa Barbara	1,942	2,087	1,779	1,918	3,721	4,005
Santa Clara	5,733	5,719	5,198	5,340	10,931	11,059
Santa Cruz	1,856	1,983	1,810	1,896	3,666	3,879
Shasta	1,570	1,582	1,540	1,493	3,110	3,075
Sierra	346	337	393	395	739	732
Siskiyou	1,506	1,454	1,424	1,431	2,930	2,885
Solano	1,948	1,916	1,663	1,597	3,611	3,513
Sonoma	4,035	4,111	3,795	4,839	7,830	8,950
Stanislaus	1,272	1,367	1,135	1,253	2,407	2,620
Sutter	598	588	512	511	1,110	1,099
Tehama	1,059	1,102	1,025	1,044	2,084	2,146
Trinity	296	264	257	254	553	518
Tulare	2,403	2,582	2,281	2,376	4,684	4,958
Tuolumne	884	881	889	870	1,773	1,751
Ventura	1,492	1,446	1,378	1,395	2,870	2,841
Yolo	1,147	1,165	1,247	1,237	2,394	2,402
Yuba	638	672	578	558	1,216	1,230
Totals	147,981	147,674	137,683	147,265	285,664	294,939

TABLE No. 2—Continued.

Length of School Term; Length of Time Present Teachers Have Taught; Average Monthly Salary of Teachers.

Counties.	Number of Days School Was Maintained During the Year.		Number of Months the Present Teachers Have Taught in the Schools.		Average Monthly Salary Paid Teachers in Primary and Grammar Schools.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	184	196	71	67	$85 77	$84 42
Alpine	156	158	4	8	65 00	66 00
Amador	165	169	20	21	60 15	63 95
Butte	158	163	27	24	67 26	70 22
Calaveras	167	170	24	31	64 00	68 00
Colusa	162	142	20	21	71 63	79 93
Contra Costa	189	192	35	37	73 00	75 00
Del Norte	158	179	25	29	73 50	77 69
El Dorado	149	161	14	14	58 90	64 44
Fresno	161	162	53	23	77 00	76 70
Glenn	160	170	15	18	70 00	71 62
Humboldt	174	176	27	44	69 52	70 64
Inyo	147	156	16	21	73 59	77 00
Kern	166	164	18	31	75 13	78 30
Kings	159	157	20	20	76 25	78 35
Lake	160	167	20	21	58 44	67 00
Lassen	152	157	18	22	67 87	72 12
Los Angeles	180	180	39	40	78 08	78 69
Madera	164	172	11	17	73 66	75 70
Marin	186	191	37	38	68 45	68 50
Mariposa	155	157	11	12	67 86	69 18
Mendocino	160	164	17	16	62 27	65 93
Merced	162	166	14	17	70 32	73 42
Modoc	144	156	11	10	83 00	70 67
Mono	165	179	12	16	75 00	76 16
Monterey	170	182	29	22	65 00	66 00
Napa	181	183	41	37	62 85	64 22
Nevada	161	159	55	59	70 20	71 75
Orange	180	179	23	17	74 86	91 26
Placer	164	168	25	25	68 17	69 67
Plumas	144	153	9	9	66 80	70 00
Riverside	172	169	26	27	68 02	68 55
Sacramento	169	174	72	77	74 25	83 08
San Benito	173	171	25	24	66 00	69 00
San Bernardino	171	145	83	24	75 89	73 43
San Diego	165	167	24	25	65 71	68 93
San Francisco	218	150	158	164	71 20	93 28
San Joaquin	165	179	58	53	75 00	77 00
San Luis Obispo	168	168	20	19	65 33	69 09
San Mateo	191	191	42	39	61 71	65 14
Santa Barbara	182	183	26	23	69 27	69 40
Santa Clara	189	190	53	51	72 25	72 50
Santa Cruz	190	193	53	48	61 60	64 20
Shasta	147	158	15	14	65 54	67 54
Sierra	163	165	22	19	72 97	77 73
Siskiyou	147	158	14	8	70 43	73 00
Solano	180	184	42	43	68 40	69 00
Sonoma	183	186	29	30	63 00	68 46
Stanislaus	169	173	20	22	68 30	73 90
Sutter	164	166	22	25	70 00	71 16
Tehama	161	156	16	22	66 21	68 40
Trinity	138	151	19	22	68 00	70 00
Tulare	157	157	18	18	70 82	73 99
Tuolumne	171	167	29	42	68 00	71 00
Ventura	183	184	19	19	70 00	72 80
Yolo	164	168	30	27	71 00	72 47
Yuba	158	163	32	28	66 33	68 65
Averages	167	169	30	32	$69 45	$72 35

TABLE No. 2—Continued.

Visits.

Counties.	Number School Visits made by County Superintendent.		Number Schools not Visited by County Superintendent.		Number School Visits made by School Trustees.		Number Sch Visits made Other Perso	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	19
Alameda	834	1,132			1,554	2,016	18,180	15
Alpine	3	6			7	7	32	
Amador	85	106			153	166	1,165	1
Butte	125	104		2	245	260	1,925	1
Calaveras	74	68			185	146	1,436	1
Colusa	59	58			82	86	539	
Contra Costa	175	172			309	259	1,134	1
Del Norte	22	19			37	45	361	
El Dorado	72	64		5	107	123	933	1
Fresno	257	290	1		569	634	3,784	3
Glenn	45	45			66	30	638	
Humboldt	164	167		1	305	304	3,556	4
Inyo	20	19			47	39	162	
Kern	109	117	2	1	215	215	1,606	1
Kings	65	74	1	1	92	129	1,003	
Lake	48	49			68	97	861	1
Lassen	42	40			75	52	717	
Los Angeles	6,690	5,902			2,070	1,299	43.778	53
Madera	48	52			112	154	701	
Marin	218	209			200	199	1,342	
Mariposa	53	48	1		44	40	489	
Mendocino	166	153	1	7	320	356	2,274	2
Merced	121	152			168	186	997	1
Modoc	44	40	1	1	86	73	910	
Mono	11	10	1	1	23	25	187	
Monterey	154	185		2	418	417	2.638	2
Napa	111	106			114	132	1,096	1
Nevada	96	83		1	110	115	1,598	1
Orange	229	198			282	326	2,055	1
Placer	95	96			162	160	1,176	1
Plumas	28	27	2		51	69	374	
Riverside	120	165			337	421	3.742	3
Sacramento	489	606			466	341	3,528	3
San Benito	127	105			161	133	1,172	
San Bernardino	185	209			319	396	6.219	7
San Diego	241	219	4	4	722	973	6,515	6
San Francisco	4,036	1,651			3,203	975	48,269	31
San Joaquin	220	201			287	256	2,545	2
San Luis Obispo	145	139		4	409	312	1,698	1
San Mateo	125	119			197	192	1,129	1
Santa Barbara	146	142	1	1	213	282	1.501	1
Santa Clara	340	395			1,272	982	9,982	8
Santa Cruz	125	109	1	7	207	202	2,659	2
Shasta	147	157	1		264	289	2.823	2
Sierra	27	29			39	51	801	
Siskiyou	104	99	2	2	190	163	1,849	1
Solano	145	141			273	239	1,623	1
Sonoma	231	242			645	490	3.582	3
Stanislaus	116	104			139	176	1,076	1
Sutter	57	51			33	33	606	
Tehama	74	84	9	9	114	103	1,267	1
Trinity	43	43			81	64	564	
Tulare	172	157		4	332	258	2,875	2
Tuolumne	36	59	1		126	106	951	
Ventura	106	111	1	1	144	119	1,227	1
Yolo	78	79		1	122	109	920	
Yuba	77	66			86	76	990	
Totals	17,975	15,900	30	54	18,657	15,900	207,760	19

TABLE No. 2—Continued.

School Libraries—State Text-Books Used.

Counties.	Number of Volumes in School Library at Close of School Year.		Number of Volumes in County Teachers' Library (Office of County Superintendent of Schools).		Districts Using Only the Authorized Series of Text-Books.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	54,531	52,970	2,095	2,160	54	52
Alpine	580	627	48	80	3	3
Amador	12,230	13,302	207	208	43	42
Butte	26,639	28,246	548	551	74	74
Calaveras	18,525	18,417	556	560	55	53
Colusa	5,228	17,147	214	232	37	36
Contra Costa	37,036	41,354	580	600	53	55
Del Norte	3,734	3,915	51	50	16	16
El Dorado	17,678	17,785	175	472	63	60
Fresno	50,195	58,848	1,441	1,500	118	123
Glenn	13,802	12,824	436	438	35	32
Humboldt	40,145	40,351	542	576	103	105
Inyo	5,662	5,919	80	85	18	18
Kern	26,206	46,239	279	322	65	66
Kings	11,447	11,028	400	450	20	23
Lake	10,504	10,938	365	392	40	40
Lassen	8,059	8,459	120	120	34	33
Los Angeles	109,562	124,313	2,851	3,300	140	140
Madera	10,755	12,452	350	375	35	35
Marin	33,660	31,809	305	308	42	41
Mariposa	8,275	7,710	185	190	30	31
Mendocino	43,071	45,704	436	438	120	121
Merced	22,597	24,727	600	700	57	56
Modoc	9,343	10,020	310	335	34	34
Mono	4,619	5,008	45	113	9	9
Monterey	46,086	48,681	950	1,000	94	91
Napa	19,057	20,099	865	865	51	50
Nevada	22,594	24,233	275	286	43	43
Orange	31,907	34,223	3,250	3,462	43	43
Placer	28,536	29,679	788	818	57	56
Plumas	9,118	9,677	170	250	27	26
Riverside	29,273	31,174	764	891	62	61
Sacramento	30,460	33,[illegible]1	325	387	71	69
San Benito	15,587	14,[illegible]1	300	303	41	42
San Bernardino	37,689	39,934	1,046	1,075	53	52
San Diego	47,363	44,644	2,800	2,748	121	122
San Francisco	78,184	41,263	3,250		1	1
San Joaquin	42,523	46,387	750	770	85	84
San Luis Obispo	35,653	35,015	450	475	91	91
San Mateo	22,679	23,573	1,500	1,600	33	32
Santa Barbara	32,925	34,220	270	269	59	59
Santa Clara	59,490	62,013	2,582	2,608	82	80
Santa Cruz	24,021	24,669	1,538	1,543	54	53
Shasta	36,372	37,736	500	506	104	107
Sierra	6,803	7,695	84	84	20	19
Siskiyou	28,859	29,429	850	837	85	85
Solano	28,064	28,956	400	450	51	53
Sonoma	81,736	87,547	1,644	1,646	137	137
Stanislaus	19,580	20,695	747	750	55	56
Sutter	14,010	15,180	500	560	34	34
Tehama	17,828	17,406	450	453	61	59
Trinity	4,796	5,051	60	69	23	23
Tulare	48,453	48,565	631	643	104	102
Tuolumne	8,429	9,050	162	227	37	37
Ventura	33,980	37,132	550	575	49	49
Yolo	18,159	19,631	1,360	1,360	48	48
Yuba	12,304	14,533	294	295	37	38
Totals	1,556,601	1,626,214	43,324	42,360	3,711	3,200

TABLE No. 2—Continued.

Length of School Term.

Counties.	Less than 120 days during year.		120 and less than 160 days during year.		160 and less than 200 days during year.		200 days or over.	
	1905.	1906.	1905	1906.	1905.	1906.	1905.	1906.
Alameda		2	7	2	44	14	3	34
Alpine			3	3				
Amador			2	1	40	40	1	1
Butte			18	9	54	64	2	1
Calaveras			3	1	52	50		2
Colusa			3	1	34	35		
Contra Costa		1		1	33	24	20	29
Del Norte			7		9	14		2
El Dorado		2	55	9	8	48		1
Fresno		3	16	12	102	107		1
Glenn			3	1	32	31		
Humboldt			14	5	66	81	23	19
Inyo				6	11	12	7	
Kern			17	10	48	55		1
Kings			8	12	12	11		
Lake			9	3	31	37		
Lassen	1	1	11	4	22	28		
Los Angeles			8	1	128	139	4	
Madera			4	1	30	33	1	1
Marin	1			1	27	32	14	8
Mariposa		1	13	8	17	22		
Mendocino			37	24	81	94	2	3
Merced			5	2	52	54		
Modoc			21	10	13	24		
Mono			5		4	7		2
Monterey	2		3		78	71	11	20
Napa		1	4	2	34	29	13	18
Nevada		1	20	16	23	26		
Orange			2		41	43		
Placer		1	8	5	49	50		
Plumas	3		13	13	11	13		
Riverside			1	4	61	57		
Sacramento			5	18	60	51	6	
San Benito		2	1	2	37	36	3	2
San Bernardino			5	3	48	49		
San Diego	1		17	14	100	107	3	1
San Francisco				1			1	
San Joaquin	1	1	21	1	63	67		15
San Luis Obispo		1	11	10	76	75	4	5
San Mateo			1	3	14	12	18	17
Santa Barbara			1		40	41	18	18
Santa Clara				1	54	44	28	35
Santa Cruz			1	1	24	19	29	33
Shasta	1		49	22	54	85		
Sierra			3	6	16	12	1	1
Siskiyou	3	2	49	21	33	61		1
Solano			2	1	39	35	10	17
Sonoma		1	7	1	97	104	33	32
Stanislaus			4		51	55		1
Sutter			6	9	28	25		
Tehama	1	1	3	34	57	24		
Trinity			22	10	1	13		
Tulare		1	38	26	66	75		
Tuolumne		1	1	2	35	32	1	2
Ventura					39	38	10	11
Yolo			1	1	47	46		1
Yuba			14	10	23	28		
Totals	14	23	582	364	2,349	2,478	266	335

TABLE No. 2—Continued.

School Houses.

Counties.	Number Built of Brick.		Number Built of Stone.		Number Built of Adobe.		Number Built of Wood.		Total Number School Houses at Close of Year.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	7	5					86	92	93	97
Alpine							3	3	3	3
Amador	4	4					42	42	46	46
Butte	6	6					74	75	80	81
Calaveras	1	1			1	1	56	52	58	54
Colusa	4	4					33	33	37	37
Contra Costa	1						57	58	58	58
Del Norte							16	16	16	16
El Dorado							61	60	61	60
Fresno	9	11			1	1	122	126	132	138
Glenn							32	31	32	31
Humboldt							119	122	119	122
Inyo							19	18	19	18
Kern	8	8	1	1			54	58	63	67
Kings	3	3					19	20	22	23
Lake	1	1					39	38	40	39
Lassen	1	1					32	32	33	33
Los Angeles	14	25			1	1	293	291	308	317
Madera	2	2			1	1	34	34	37	37
Marin		1					45	46	45	47
Mariposa							31	29	31	29
Mendocino							128	127	128	127
Merced	4	4					56	56	60	60
Modoc	1	2					32	31	33	33
Mono							9	10	9	10
Monterey	1	1					105	107	106	108
Napa			1	1			56	56	57	57
Nevada							54	54	54	54
Orange	4	4					56	57	60	61
Placer							57	55	57	55
Plumas	1	1					26	25	27	26
Riverside	7	7			1	1	65	66	73	74
Sacramento	4	4					80	80	84	84
San Benito							43	43	43	43
San Bernardino	15	15	1	1			74	75	90	91
San Diego	5	5			3	3	145	150	143	158
San Francisco	7	1					123	52	130	53
San Joaquin	12	12	1	1			85	86	98	99
San Luis Obispo	2	2					94	92	96	94
San Mateo	1	1		1			37	37	38	39
Santa Barbara	1	1	1	1			74	76	76	78
Santa Clara	1			1			100	103	101	104
Santa Cruz							65	65	65	65
Shasta	8	8					99	100	107	108
Sierra							20	19	20	19
Siskiyou	4	1				2	81	81	85	84
Solano	2	2					59	59	61	61
Sonoma	1	1					154	156	155	157
Stanislaus	3	3					50	54	53	57
Sutter	2	2					32	32	34	34
Tehama	2	2					60	57	62	59
Trinity							23	23	23	23
Tulare	7	8	1	1			105	100	113	109
Tuolumne	3	3					37	38	40	41
Ventura	1	1					54	54	55	55
Yolo	1	1					52	52	53	53
Yuba	1	1					37	38	38	39
Totals	162	165	6	8	8	10	3,694	3,642	3,860	3,825

TABLE No. 2—Continued.

Salaries.

Counties.	Average Monthly Wages Paid to City Superintendents or Supervising Principals. (Men.)		Average Monthly Wages Paid Principals of High Schools.			
			1905.		1906.	
	1905.	1906.	Men.	Women.	Men.	Women.
Alameda	$270 40	$270 40	$199 26		$201 55	
Alpine						
Amador			100 00		150 00	
Butte			147 22		149 99	
Calaveras					131 25	
Colusa			140 00		145 00	
Contra Costa			138 00		142 60	
Del Norte			130 00		130 00	
El Dorado					150 00	
Fresno	200 00	230 00	144 00		151 95	$107 50
Glenn			129 17		137 50	
Humboldt	180 00	180 00	97 50		101 25	
Inyo			125 00		140 00	
Kern	166 67	166 67	200 00		200 00	
Kings			147 50		145 00	
Lake			120 00		133 33	
Lassen			160 00		166 66	
Los Angeles	253 33	221 52	150 51	$130 00	156 34	128 33
Madera			150 00		150 00	
Marin			170 00		170 00	
Mariposa						
Mendocino			142 50		142 50	
Merced			162 50		175 00	
Modoc			150 00		150 00	
Mono						
Monterey	150 00	150 00	137 50		137 50	
Napa			143 75		151 50	
Nevada			141 67		108 33	
Orange			122 33	125 00	126 94	
Placer			180 00		180 00	
Plumas						
Riverside	200 00	222 00	117 00	160 00	121 50	172 00
Sacramento	225 00	225 00	185 00		210 00	
San Benito			125 00		150 00	
San Bernardino	125 00	150 00	152 00		183 00	
San Diego	166 66	166 66	124 40		124 40	
San Francisco	400 00	400 00	229 70		240 85	
San Joaquin	240 00	200 00	175 00		175 00	
San Luis Obispo			150 00	100 00	133 33	
San Mateo			152 50		157 50	
Santa Barbara	166 66	208 33	130 00		143 75	
Santa Clara	200 00	200 00	163 00		165 62	
Santa Cruz			175 00		161 66	
Shasta			166 67		166 65	
Sierra						
Siskiyou			152 50		152 50	
Solano			148 00		151 00	
Sonoma	220 00	220 00	136 25		150 00	
Stanislaus			150 00		166 50	
Sutter			140 00		140 00	
Tehama			138 33		147 50	
Trinity						
Tulare			159 25		156 25	
Tuolumne			150 00		150 00	
Ventura		160 00	160 00		160 00	
Yolo			121 66		133 33	
Yuba	50 00	50 00	175 00		175 00	
Averages	$200 86	$201 21	$149 07	$128 75	$153 52	$135 94

TABLE No. 2—Continued.

Salaries.

Counties.	Average Monthly Wages Paid Principals of Primary and Grammar Schools.				Average Monthly Wages Paid Teachers in High Schools.			
	1905.		1906		1905.		1906.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Alameda	$163 22	$155 40	$141 72	$113 97	$134 76	$116 50	$133 41	$114 78
Alpine		65 00						
Amador	95 00	75 00	97 00	71 66		75 00		85 00
Butte	103 14	76 25	105 00	76 25	130 00	90 85	135 00	85 00
Calaveras	93 00	75 00	95 00	72 50			120 00	90 00
Colusa	105 00		105 00	85 00		85 00		90 00
Contra Costa	93 50	89 60	99 44	89 10		7 75	100 00	85 83
Del Norte	95 00		95 00			80 00		80 00
El Dorado	87 50		87 50				125 00	
Fresno	103 16	78 00	106 00	79 00	123 18	90 00	119 35	94 74
Glenn	105 00	75 00	105 00	70 00	127 77	86 67	110 00	96 67
Humboldt	88 64	76 16	91 75	77 13	115 00	99 38	115 00	98 75
Inyo	90 00	90 00	110 00	90 00		100 00		90 00
Kern	99 72	80 00	100 00	82 50	125 00	117 50	125 00	105 00
Kings	107 50		107 50		110 00	105 71	110 00	105 71
Lake	85 00	75 00	100 00	80 00	80 00	80 00	90 00	90 00
Lassen	90 00		90 00		120 00	100 00	133 33	
Los Angeles	106 60	90 75	112 25	98 54	121 78	98 43	123 00	104 42
Madera		125 00		125 00	125 00	110 00	125 00	110 00
Marin	93 34	76 67	107 50	76 00		90 00	100 00	90 00
Mariposa	82 50	76 00	80 00	85 00				
Mendocino	89 44	70 00	91 66	85 00	105 00	92 50	102 50	94 33
Merced	95 00	85 00	95 00	88 00	132 00	103 33	108 33	102 50
Modoc	82 50		85 00	85 00		85 00	100 00	100 00
Mono	125 00	75 00	125 00	75 00				
Monterey	81 00	71 00	86 25	72 75	97 00	86 00	97 00	93 00
Napa	117 50	66 70	123 33	71 67	100 00	85 00	110 00	85 83
Nevada	140 00	90 00	115 00	80 00		103 57	115 00	100 71
Orange	88 56	77 92	93 53	81 83	106 38	92 80	98 93	98 66
Placer	97 62	85 00	96 48	85 00	130 00	115 00	130 00	113 33
Plumas	72 50			72 50				
Riverside	89 37	89 33	86 30	93 90	111 00	86 83	115 40	85 80
Sacramento	97 50	137 00	109 00			127 00	115 30	107 15
San Benito	102 00	58 00	115 00	70 00	102 00	90 00	100 00	100 00
San Bernardino	101 00	80 00	98 25	80 26	119 00	94 09	122 34	103 16
San Diego	92 00		92 00	85 00	87 81	85 00	121 00	87 50
San Francisco	159 21	136 00	185 80	166 38	129 05	128 11	127 35	125 15
San Joaquin	100 33	100 00	105 36	95 00	110 00	95 50	127 00	105 50
San Luis Obispo	88 57	70 00	92 00	73 75	100 00	87 00	100 00	82 86
San Mateo	102 85	72 50	106 42	72 50	90 00	91 25	87 50	94 00
Santa Barbara	89 00	76 25	88 33	78 57	110 00	87 85	111 43	99 17
Santa Clara	105 18	80 00	113 90	79 50	127 50	91 00	121 50	93 60
Santa Cruz	90 80	68 25	95 00	67 50	100 00	100 00	115 00	94 60
Shasta	100 00	77 50	95 00	87 00	107 40	80 00	111 10	97 00
Sierra	90 00		98 33		115 00	98 00		
Siskiyou	88 10		96 25	90 00			120 00	95 00
Solano	107 50	79 38	109 28	83 57	92 50	88 85	100 00	94 28
Sonoma	93 50	64 00	111 00	71 00	109 28	84 58	110 00	88 00
Stanislaus	98 57		100 00		90 00	145 00	100 00	96 66
Sutter	90 00		90 00			95 00		100 00
Tehama	115 00	80 00	115 00	77 50	115 00	108 87	115 00	101 62
Trinity	90 00		90 00					
Tulare	95 00	80 00	92 83	78 33	110 50	99 11	122 00	98 33
Tuolumne	101 00	96 00	106 66	100 00		93 00	100 00	90 00
Ventura	99 09	72 50	96 50	77 50	90 70	93 57	106 00	93 33
Yolo	105 00	74 00	103 75	75 00		92 50		96 25
Yuba	95 00		95 00			110 00		103 33
Averages	$99 30	$83 49	$102 48	$84 14	$110 88	$96 50	$113 04	$105 25

TABLE No. 2—Continued.

Salaries.

Counties.	Average Monthly Wages Paid Teachers in Grammar Schools.				Average Monthly Wages Paid Teachers in Primary Schools.			
	1905.		1906.		1905.		1906.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Alameda	$109 59	$84 19	$112 77	$85 06	$72 66	$77 96	$70 00	$78 44
Alpine	.....	.....	.....	66 66	.....	.....	.....	67 00
Amador	65 00	57 70	67 50	60 25	60 00	55 35	.....	58 43
Butte	75 00	64 26	78 57	66 57	65 00	60 33	69 58	67 01
Calaveras	63 88	61 08	64 00	70 00	65 00	61 78	.....	.....
Colusa	70 00	66 55	71 42	70 00	.....	73 00	.....	78 75
Contra Costa	90 00	70 40	80 00	71 21	.....	69 00	.....	70 71
Del Norte	.....	60 00	70 00	.....	.....	.....	.....	65 00
El Dorado	67 50	60 26	70 00	62 83	60 00	57 30	62 50	64 77
Fresno	123 18	90 00	81 40	72 00	80 88	67 00	.....	73 00
Glenn	82 86	68 08	76 39	68 45	60 00	63 25	65 00	66 88
Humboldt	79 25	67 56	78 10	67 67	73 33	67 25	75 00	67 42
Inyo	.....	70 00	.....	82 50	.....	75 00	.....	82 50
Kern	90 64	73 20	79 64	75 06	.....	.....	.....	.....
Kings	73 67	73 67	.....	78 35	.....	.....	.....	.....
Lake	60 00	57 00	67 85	64 23	.....	50 00	.....	.....
Lassen	69 61	65 62	78 00	70 28	70 00	65 83	72 66	68 33
Los Angeles	89 63	75 03	82 22	75 63	.....	72 28	81 00	71 60
Madera	73 30	73 20	73 80	76 60	.....	.....	.....	.....
Marin	80 00	64 20	.....	66 25	.....	62 92	.....	66 50
Mariposa	71 66	65 50	73 33	69 25	.....	70 33	.....	71 25
Mendocino	62 19	60 26	66 12	63 84	.....	59 16	.....	.....
Merced	80 90	68 66	80 00	75 00	.....	.....	.....	.....
Modoc	67 50	68 33	74 00	64 13	.....	70 00	.....	71 00
Mono	.....	70 00	75 00	72 50	70 00	.....	.....	67 50
Monterey	65 00	63 00	.....	65 00	.....	62 00	.....	64 50
Napa	70 00	61 80	63 00	62 47	.....	55 40	.....	58 89
Nevada	80 83	66 95	82 14	68 11	70 00	66 74	62 50	68 33
Orange	88 69	70 32	95 83	70 57	.....	68 20	.....	72 50
Placer	67 50	64 07	70 00	65 54	.....	64 78	60 00	65 28
Plumas	90 00	66 00	65 00	70 00	.....	.....	.....	62 50
Riverside	.....	68 12	67 00	63 00	64 00	62 27	65 00	66 62
Sacramento	70 00	.....	78 75	67 45	80 00	69 55	80 00	67 50
San Benito	65 00	61 00	70 00	66 00	.....	56 00	.....	64 00
San Bernardino	67 00	67 00	.....	67 00	69 00	68 00	75 00	68 00
San Diego	66 07	65 00	68 90	.....	.....	62 50	.....	65 00
San Francisco	67 00	79 87	150 00	89 75	75 00	73 21	91 20	84 77
San Joaquin	77 10	75 33	73 75	73 02	.....	66 48	60 00	74 11
San Luis Obispo	64 44	63 00	66 84	67 60	.....	56 25	.....	65 00
San Mateo	50 00	60 00	60 00	62 00	.....	55 60	.....	58 80
Santa Barbara	75 00	63 64	73 33	63 88	60 00	62 50	55 00	69 10
Santa Clara	72 00	65 00	60 00	68 00	50 70	71 00	.....	70 00
Santa Cruz	.....	60 00	63 75	61 15	.....	58 94	.....	61 50
Shasta	65 54	65 54	67 54	67 54	.....	70 00	67 54	67 54
Sierra	93 29	66 67	98 33	.....	.....	67 40	.....	76 66
Siskiyou	73 00	70 00	70 40	68 00	60 00	60 00	70 00	.....
Solano	61 00	65 23	61 25	66 00	55 00	62 95	.....	62 81
Sonoma	65 00	61 75	66 00	69 00	.....	59 00	.....	63 00
Stanislaus	67 00	65 39	70 83	70 82	.....	.....	.....	.....
Sutter	69 70	67 60	68 30	68 56	.....	68 57	.....	73 00
Tehama	69 58	73 53	.....	61 53	.....	67 70	.....	75 00
Trinity	.....	70 00	.....	70 00	80 00	66 00	70 00	70 00
Tulare	78 50	68 86	77 35	71 30	.....	60 00	65 00	70 00
Tuolumne	76 00	65 00	76 50	66 66	.....	62 00	.....	72 00
Ventura	66 00	65 80	72 33	66 75	.....	65 00	.....	69 03
Yolo	65 00	72 50	72 55	.....	.....	70 00	.....	68 57
Yuba	71 66	62 85	70 60	66 33	.....	67 50	.....	70 71
Averages	$74 04	$67 19	$75 11	$69 01	$66 99	$64 65	$69 31	$67 37

TABLE No. 2—Continued.

Salaries.

Counties.	Average Monthly Wages Paid Teachers in Kindergarten Schools.		Average Monthly Wages Paid in County.	
	1905.	1906.	1905.	1906.
	Women.	Women.	All Teachers.	All Teachers.
Alameda	$91 20	$91 20	$92 76	$89 68
Alpine			65 00	66 66
Amador			61 21	65 93
Butte			70 78	73 31
Calaveras			64 41	70 00
Colusa			75 51	74 77
Contra Costa			77 68	79 17
Del Norte			66 50	69 68
El Dorado			58 91	66 59
Fresno	75 00	70 00	79 00	80 80
Glenn			74 43	76 84
Humboldt			72 00	73 64
Inyo			76 83	81 97
Kern			79 39	79 70
Kings			92 00	83 71
Lake			62 00	69 72
Lassen			72 25	77 58
Los Angeles	56 49	56 76	81 11	82 72
Madera			77 75	79 34
Marin			70 82	70 73
Mariposa			67 86	69 18
Mendocino			67 72	71 47
Merced			75 17	78 41
Modoc			73 33	76 54
Mono			75 00	76 66
Monterey			70 00	70 00
Napa			67 50	68 19
Nevada			73 91	75 00
Orange	70 00		79 92	81 07
Placer			71 74	73 14
Plumas			66 83	70 00
Riverside	55 00	52 50	73 82	74 35
Sacramento	57 50	57 50	80 98	84 30
San Benito			66 00	73 00
San Bernardino		32 50	77 00	81 05
San Diego	70 00	74 36	69 60	74 05
San Francisco		58 55	98 87	69 38
San Joaquin			79 66	81 79
San Luis Obispo			68 75	71 76
San Mateo			66 93	68 41
Santa Barbara	62 50	61 43	75 26	77 34
Santa Clara			74 55	78 16
Santa Cruz	62 50	62 50	63 47	69 55
Shasta			67 50	69 62
Sierra			72 97	77 66
Siskiyou			73 58	75 00
Solano			74 50	75 33
Sonoma			66 00	72 00
Stanislaus			70 61	77 27
Sutter			73 00	74 00
Tehama		75 00	72 69	71 41
Trinity			68 00	70 00
Tulare			75 10	77 75
Tuolumne			70 00	74 14
Ventura			75 62	78 58
Yolo	65 00	65 00	74 56	76 58
Yuba			70 62	71 45
Averages	$66 52	$63 11	$72 79	$75 30

TABLE No. 2—Continued.

Salaries.

Counties.	Class as fixed by Statute of 1897.	Area, in square miles.	Population as fixed by the Statute of 1897.	Salary of County Superintendent as fixed by County Government Act of 1897.	Salary allowed for Deputies.	Pay as Member of County Board of Education per day when Board is in session.	Traveling Expenses per Annum, not to exceed—
Alameda	3	840	100,415	$3,000	$900	$5 00	$10 00 per district.
Alpine	57	575	490	100		5 00	10 00 " "
Amador*	32	568	13,250	600		5 00	300 00 per annum.
Butte	14	1,764	22,770	1,500		5 00	10 00 per district.
Calaveras	31	990	14,175	1,000		5 00	10 00 " "
Colusa	39	1,202	10,510	1,600		5 00	10 00 " "
Contra Costa	26	750	17,200	1,800		5 00	10 00 " "
Del Norte	55	1,546	3,465	400		5 00	10 00 " "
El Dorado	33	1,891	13,040	1,500		5 00	10 00 " "
Fresno	9	5,940	25,080	2,000	1,200	5 00	10 00 " "
Glenn	47	1,248	7,445	1,600		5 00	10 00 " "
Humboldt	11	3,507	27,255	2,000		5 00	10 00 " "
Inyo	54	10,224	4,360	400		5 00	10 00 " "
Kern	25	8,159	17,330	1,800			10 00 " "
Kings	43	1,257	8,935	1,500			10 00 " "
Lake	46	1,332	7,600	800		5 00	10 00 " "
Lassen	52	4,750	5,330	600		5 00	10 00 " "
Los Angeles	2	3,957½	124,875	3,000	2,520		5 00 " "
Madera	45	2,140	7,975	500		5 00	10 00 " "
Marin	38	516	11,360	1,650		5 00	10 00 " "
Mariposa	50	1,580	5,720	600		5 00	10 00 " "
Mendocino	17	3,460	21,095	1,600		5 00	10 00 " "
Merced	41	1,750	9,815	1,400			300 00 per annum.
Modoc	51	4,097	5,565	700		5 00	10 00 per district.
Mono	56	2,796	2,775	400		5 00	10 00 " "
Monterey	18	3,450	20,600	1,650			10 00 " "
Napa	23	800	18,220	1,600		5 00	10 00 " "
Nevada	16	958	21,905	2,000		5 00	10 00 " "
Orange	27	780	16,540	1,500		5 00	10 00 " "
Placer	20	1,484	18,935	1,800			300 00 per annum.
Plumas	49	2,361	5,970	600		5 00	10 00 per district.
Riverside†	21	7,008	18,400	2,000		5 00	10 00 " "
Sacramento	5	1,007	47,820	2,000		5 00	300 00 per annum.
San Benito	42	1,476	9,090	1,500			10 00 per district.
San Bernardino	10	20,160	27,500	1,500			10 00 " "
San Diego	8	8,800	35,620	2,500	1,200	5 00	10 00 " "
San Francisco	1	42	298,215	4,000	7,200	5 00	
San Joaquin	7	1,370	36,670	2,000		5 00	10 00 per district.
San Luis Obispo	19	3,500	20,140	1,500		5 00	10 00 " "
San Mateo	35	470	12,450	1,500		5 00	10 00 " "
Santa Barbara	22	2,450	18,310	1,800		5 00	10 00 " "
Santa Clara	4	1,355	58,290	2,000	900	5 00	10 00 " "
Santa Cruz	15	425	22,055	1,800		5 00	10 00 " "
Shasta	29	4,050	16,145	1,800		5 00	10 00 " "
Sierra	48	910	6,540	625		5 00	10 00 " "
Siskiyou	28	6,078	16,190	1,500		5 00	500 00 per annum.
Solano	12	911	26,130	1,500		5 00	10 00 per district.
Sonoma	6	1,540	37,345	2,000		5 00	10 00 " "
Stanislaus	34	1,486	12,745	1,200			10 00 " "
Sutter	44	611	8,565	1,200		5 00	10 00 " "
Tehama	36	3,200	11,675	1,500		5 00	10 00 " "
Trinity	53	3,276	4,990	700		5 00	10 00 " "
Tulare	13	4,935	24,150	1,800		5 00	10 00 " "
Tuolumne	40	2,232	10,235	900		5 00	10 00 " "
Ventura	30	1,850	14,410	1,500		5 00	10 00 " "
Yolo	24	1,017	17,375	1,600		5 00	10 00 " "
Yuba	37	625	11,635	1,200		5 00	10 00 " "
Totals		157,455½	1,312,690	$84,325	$13,920		

*Supervisors may fix salary at $1,200 per annum and require Superintendent to devote entire time to school.

†Office hours, 2 to 5 P. M., on business days.

TABLE No. 2—Continued.

Expenses.

Counties.	Amount of Money Drawn from Unapportioned County Fund with which to pay							
	1905.				1906.			
	Institute Instructors.	Institute Expenses.	Postage and Expressage.	Binding School Documents.	Institute Instructors.	Institute Expenses.	Postage and Expressage.	Binding School Documents.
Alameda		$184 25	$252 00		$200 00	$20 00	$189 00	$9 00
Alpine			6 00	$21 00			6 00	50
Amador		23 00	86 00	20 00	252 70	22 65	84 00	20 00
Butte	$100 00	56 60	155 00		150 00		154 00	
Calaveras	150 00	50 00	114 00		235 00	65 00	112 00	
Colusa			62 00		113 00	2 75	76 00	
Contra Costa	150 00	37 50	120 00		100 30		120 00	23 60
Del Norte	150 00	30 00	32 00		180 00	25 00	32 00	
El Dorado	138 00	62 00	129 84		180 00	75 00	83 56	
Fresno	96 50	61 00	170 95	37 30		100 00	190 00	9 10
Glenn	135 00	49 50	70 00		200 00		67 00	
Humboldt	172 00	28 00	81 20		150 00	53 50	106 06	
Inyo			27 50		200 00	34 00	32 00	
Kern	100 00	96 95			100 00	129 12		
Kings	187 50	77 50	52 00		100 00	100 00	60 00	
Lake	214 90	20 00	32 10		225 00	22 50	35 00	
Lassen	180 00	20 00	68 00		270 00	30 00	66 00	
Los Angeles	40 25	128 50	325 00			209 11	450 00	
Madera	130 00	39 50	76 00		100 00		76 00	
Marin	130 00	47 50	84 00	10 00	100 00	2 55	84 00	10 00
Mariposa	145 00		60 00		150 00		62 00	7 70
Mendocino	140 00	60 00	200 50		100 10		285 00	26 70
Merced	155 00	45 00	114 00	17 00	165 00	38 00	114 00	
Modoc	200 00		59 49		200 00		48 44	
Mono			18 00				18 00	
Monterey	200 00		188 00	20 00	245 00	55 00	184 00	
Napa	200 00				250 00	50 00	145 00	
Nevada	196 50	10 00	96 00		90 00	89 00	48 00	
Orange	175 00	25 00	42 50	2 00	200 00		50 00	60 00
Placer	122 50	73 70			160 00	80 50		
Plumas	160 00	39 00	53 00		240 00	40 00	52 00	
Riverside	150 00	50 00	120 00	10 00	200 00	100 00	120 00	10 00
Sacramento	145 00	55 00	95 00	1 75		117 50	185 00	1 75
San Benito		6 00	90 00	8 50		100 00	92 00	
San Bernardino	115 00		110 00		120 00		90 00	
San Diego	135 00	27 70	186 90		230 00	66 00	243 50	
San Francisco	80 00	103 50			120 00	70 00		
San Joaquin	84 25	50 00	157 00	20 00	200 00		171 00	
San Luis Obispo	148 75	51 25	192 00		230 00	71 55	189 00	
San Mateo		100 25	29 87		182 97	54 70	16 00	
Santa Barbara	150 00	5 00	130 00	66 75	150 00		128 00	
Santa Clara	100 00		145 00		100 00		175 00	
Santa Cruz	100 00		114 00	20 00	100 00	25 00	117 00	
Shasta	195 00	225 00	207 00		200 00	41 50	214 00	
Sierra			140 00			15 28	38 00	
Siskiyou	175 00	25 00	165 00	17 65	200 00	50 00	150 00	10 00
Solano	150 00	47 50	51 44	78 00	125 00	25 65	80 00	81 00
Sonoma	10 00	96 50	276 00			22 60	280 00	12 00
Stanislaus	176 20	18 50	108 00		257 40	14 00	114 00	
Sutter	181 00	27 90	70 00			105 00	70 00	
Tehama	200 00		126 00		200 00		125 00	
Trinity	200 00		46 00		190 00	34 30	46 00	
Tulare	190 40	7 60	220 00		267 70	32 30	280 00	
Tuolumne			178 00				78 00	
Ventura	100 00	100 00	106 00	20 00	200 00		106 00	20 00
Yolo	105 00	95 00	90 00			144 00	60 00	
Yuba	146 15	28 50	70 00		220 00	34 50	70 00	
Totals	**$6804 90**	**$2161 95**	**$5800 29**	**$369 95**	**$8149 17**	**$2367 56**	**$6206 56**	**$301 35**

TABLE No. 2—Continued.

Expenses.

Counties.	Amount of Money Drawn from the Institute and Library Fund with which to pay			
	Institute Instructors.		For Books for County Teachers' Library.	
	1905.	1906.	1905.	1906.
Alameda	$268 61		$218 28	$115 91
Alpine				
Amador		$41 45	2 00	15 50
Butte		50 00	13 59	15 50
Calaveras			49 95	23 65
Colusa		46 00		49 30
Contra Costa	60 00		44 25	22 50
Del Norte	25 00		25 00	
El Dorado			26 91	105 60
Fresno			102 03	56 62
Glenn			38 45	10 70
Humboldt	76 00		24 25	15 30
Inyo				5 00
Kern			25 50	29 25
Kings	60 00	15 00	14 60	17 10
Lake			5 61	65 65
Lassen				
Los Angeles	203 75	558 50	116 61	348 18
Madera				
Marin			60 87	6 28
Mariposa		15 00	3 94	17 80
Mendocino	31 00	10 00	39 25	3 50
Merced	3 00	13 00	65 12	36 30
Modoc			47 66	15 31
Mono			7 85	
Monterey		25 00	114 80	154 17
Napa			47 95	12 50
Nevada	10 00	90 00	18 95	19 95
Orange	20 00	40 00	123 56	119 48
Placer	30 00		19 60	47 75
Plumas			3 00	10 00
Riverside	27 75	50 00	73 00	67 00
Sacramento	45 00		17 09	89 00
San Benito			9 40	1 75
San Bernardino	16 00	32 50	77 17	35 00
San Diego	35 00	5 00	74 65	92 60
San Francisco			283 54	296 00
San Joaquin	65 70		51 20	44 50
San Luis Obispo	35 25	25 00	74 15	52 75
San Mateo			33 10	12 14
Santa Barbara	55 35	64 50	13 75	16 70
Santa Clara			18 95	28 70
Santa Cruz			24 35	24 00
Shasta	60 00		33 90	26 95
Sierra		125 00		
Siskiyou		6 00	45 40	20 00
Solano	45 00		81 76	66 35
Sonoma	240 00	100 00	67 00	56 25
Stanislaus		14 25	25 22	11 56
Sutter	36 00		4 30	11 40
Tehama	3 50	3 50	16 03	16 08
Trinity		30 00	16 89	10 30
Tulare	13 00	36 05	26 00	15 20
Tuolumne			47 85	25 00
Ventura	59 00	40 00	24 65	47 23
Yolo	25 00		12 75	12 00
Yuba	25 00		6 70	4 05
Totals	$1,573 91	$1,435 75	$2,418 38	$2,421 46

TABLE No. 2—Continued.

Property.

ties.	Assessed Valuation of Taxable Property.		Rate of County School Tax per $100.		Amount Received from County Tax for School Purposes.	
	1905.	1906	1905.	1906.	1905.	1906.
ı.....	$108,896,373	$116,643,574	.27	.30	$291,217 23	$345,189 19
.....	460,829	468,385	.30	.30	1,485 30	1,385 60
.....	5,157,826	5,450,322	.32	.34	15,994 20	18,978 06
.....	16,872,164	16,934,887	.22	.21	34,926 70	35,439 67
us	6,258,470	6,085,400	.30	.33	18,952 75	19,024 55
.....	12,416,102	12,286,809	.175	.175	21,581 18	21,193 21
)osta...	21,025,826	21,910,927	.20	.20	41,681 97	42,622 77
te	3,108,946	3,209,214	.155	.17	4,330 67	5,384 00
lo	4,775,890	4,963,515	.35	.34	16,343 03	16,241 02
.....	37,330,783	38,640,483	.22	.18	79.793 93	90,740 72
.....	10,857,733	10,625,292	.165	.16	17,854 24	16,844 57
dt	24,089,483	24,824,099	.23	.26	57,077 00	64,048 32
.....	2,505,159	2,607,039	.25	.25	6,730 71	6,139 46
.....	24,857,380	25,134,795	.16	.17	40,337 13	42,111 79
.....	8,226,710	8,337,946	.25	.25	19,461 06	22,664 80
.....	3,300,315	3,327,865	.32	.32	10,332 24	10,710 16
.....	5,067,879	5,599,022	.28	.26	14,376 13	14,330 30
eles...	200,772,726	231,539,753	.22	.25	447,818 79	594,356 12
.....	7,403,563	7,438,381	.30	.30	23,893 70	16,718 86
.....	13,779,747	14,133,468	.17	.20	23,032 64	27,746 80
a	2,416,006	2,257,871	.43	.42	10,824 40	11,503 00
no.....	11,953,005	12,377,783	.30	.30	36,452 35	30,106 80
.....	15,193,705	15,227,447	.18	.18	33,991 99	26,195 06
.....	4,024,317	4,484,822	.30	.25	12,378 30	11,267 23
.....	1,128,710	1,236,349	.50	.50	5,788 41	4,508 50
y	19,446,048	19,491,182	.23	.235	44,182 16	45,882 53
.....	13,516,150	13,754,750	.175	.18	21,903 26	23,607 13
.....	7,261,700	7,370,505	.36	.39	51,822 94	33,441 27
.....	14,431,453	14,831,194	.28	.32	35,089 00	48,406 80
.....	9,933,382	9,785,008	.27	.26	26,498 50	24,635 51
.....	4,054,842	4,222,524	.26	.28	9,725 89	10,102 61
e	15,573,685	15,690,599	.24	.28	39,205 60	35,490 17
nto ...	36,184,197	37,180,623	.165	.182	59,289 67	67,482 17
ito.....	6,525,382	6,464,244	.30	.30	19,567 02	19,857 58
nardino	20,818,169	21,610,758	.267	.30	55,360 09	65,540 35
go	21,772,166	22,992,109	.25	.27	51,969 72	60,436 94
ncisco .	503,056,457	524,392,047	.064	.14	323,364 32	725,138 50
quin ..	35.982,206	36,942,107	.18	.18	64,773 57	66,247 04
Obispo	14,128,060	14,512,485	.285	.27	40,460 60	39,998 60
eo	17,461,713	18,330,652	.14	.16	24,680 01	28,594 20
arbara .	18,797,172	19,401,734	.28	.28	55,962 29	51,484 00
ara	55,470,132	56,862,660	.19	.22	101,112 52	118,460 89
uz.....	12,917,059	13,158,521	.27	.27	35,828 56	35,435 65
.....	11,953,212	12,064,364	.30	.305	34,730 21	36,223 16
.. ....	1,974,437	2,105,185	.48	.48	10,019 43	11,328 67
.....	12,051,359	12,259,654	.25	.25	29,585 71	28,532 90
.....	18,855,077	19,022,984	.20	.22	37,494 20	41,806 95
.....	30,713,696	31,098,655	.20	.23	61,826 57	72,373 84
ns	14,376,711	14,296,171	.20	.23	28,753 56	32,701 12
.....	6,676.030	6,588,234	.24	.26	15,773 37	15,676 50
.....	11,996,947	11,992,411	.23	.25	27,184 64	29,844 71
.....	1,994,843	2,271,890	.30	.30	6,334 70	6,069 00
.....	18,300,976	18,453,609	.25	.27	45,070 48	49,607 83
ne	7,732,810	7,457,960	.225	.22	16,770 27	16,639 50
.....	10,343.304	10,387,331	.345	.32	36,278 70	33,293 68
.....	16,524,471	16,695,570	.15	.16	24,494 70	25,581 48
.....	5,995,537	6,090,004	.24	.26	14,230 29	15,354 74
.....	$1,548,698,785	$1,624,023,172	Av.25+	Av.26+	$2,735,998 60	$3,410,938 58

TABLE No. 3.

Statement of Financial Statistics, showing the Receipts from all Sources of Revenue for the School Year ending June 30, 1905.

Counties.	Balance on Hand at Beginning of School Year.	Amount Received from State Apportionment.	Amount Received from County Taxes, as Apportioned by County Superintendents.	Amount Received from City or District Taxes.	Amount Received from Sale of Bonds.	Amount Received from Subscriptions and Miscellaneous Sources, as Reported by School Trustees.	Total Receipts from All Sources.
Alameda	$72,181 92	$346,662 78	$291,388 30	$52,702 48	$1,126,034 50	$9,285 70	$1,898,255 68
Alpine	236 57	774 57	1,436 43				2,447 57
Amador	9,747 53	24,322 20	15,773 60	300 00		75 96	50,219 29
Butte	13,594 95	44,823 10	35,650 22	13,511 75		1,039 60	108,619 62
Calaveras	8,513 01	26,384 63	18,124 99	751 33		315 80	54,089 76
Colusa	20,364 32	18,459 58	21,510 27	1 07		2 50	60,337 74
Contra Costa	22,727 52	47,531 70	41,283 28	5,955 45	23,260 00	578 20	141,336 15
Del Norte	2,327 64	6,829 21	4,330 67	2,081 91			15,569 43
El Dorado	6,912 46	18,586 60	16,284 36	2,436 93		264 80	44,485 15
Fresno	42,589 36	114,891 00	80,107 00	28,831 09	27,701 00	13,807 96	307,927 41
Glenn	4,338 23	12,406 95	17,666 36	2,330 02		123 07	36,864 63
Humboldt	24,895 36	75,911 00	54,883 00	4,340 67	8,239 60	20,037 85	188,297 48
Inyo	2,034 39	9,001 95	6,730 71		1,200 00	8 80	18,975 85
Kern	13,500 55	41,748 95	40,257 55	8,275 96	17,029 88	471 50	121,284 39
Kings	24,943 01	32,768 00	20,088 60	28 07	12,260 68	38 81	90,127 17
Lake	5,871 05	15,148 90	11,395 96	823 57		109 83	33,349 31
Lassen	4,532 74	10,852 00	14,617 00	5 74			30,007 48
Los Angeles	424,612 46	585,743 23	450,349 08	57,041 61	207,381 30	144,287 11	1,869,414 79
Madera	11,477 46	14,958 05	21,400 50	606 65		37 94	48,480 60
Marin	22,328 28	33,263 03	23,032 64	4,031 58	35,636 33	51 00	118,342 86
Mariposa	2,013 52	9,444 62	10,824 40	26 36			22,308 90
Mendocino	30,450 42	35,525 00	36,400 50	3,590 98	5,125 00	507 59	111,608 49
Merced	22,956 51	25,738 26	29,843 70	1,979 01	2,430 65		82,948 13
Modoc	2,892 77	14,109 99	12,070 33	809 38	750 00	33 39	30,665 86
Mono	1,825 31	4,079 25	5,788 41	702 65			12,395 62

Napa	18,451 88	34,506 11	23,150 80	1,758 35			77,867 23
Nevada	3,863 15	34,289 56	36,936 75	2,204 26		200 00	77,473 72
Orange	15,303 41	67,286 00	38,989 00	4,273 64	27,086 50	808 03	153,746 58
Placer	10,620 31	31,921 04	26,078 85	3,824 33	2,061 00	556 33	75,061 86
Plumas	7,916 36	8,971 04	9,725 89		3,056 95		29,670 24
Riverside	21,256 81	49,503 60	39,187 40	16,777 71	2,682 00	1,142 63	130,550 15
Sacramento	28,459 82	97,021 03	58,527 12	67,828 53		19,624 41	271,460 91
San Benito	11,508 88	16,549 00	19,467 70			63 19	47,588 77
San Bernardino	51,471 95	86,051 00	57,372 00	16,726 51		5,825 93	217,447 39
San Diego	22,264 42	81,103 35	52,929 35	18,293 97	8,891 25	8,148 32	191,430 66
San Francisco	67,383 28	961,847 64	152,434 88			58,476 75	1,240,142 55
San Joaquin	27,082 18	75,309 95	43,889 50	26,532 01	2,630 00	467 63	175,911 27
San Luis Obispo	38,670 66	47,080 00	37,900 00	901 86		153 86	124,706 38
San Mateo	18,545 24	34,765 00	24,805 45	2,970 93	5,175 00	1,192 56	87,454 18
Santa Barbara	30,118 43	47,708 00	47,523 00	5,824 93	7,146 17	2,761 28	141,081 81
Santa Clara	61,923 74	153,440 87	104,694 17	13,408 32	34,454 30	580 69	368,502 09
Santa Cruz	16,867 01	55,257 15	34,694 42			1,547 99	108,366 57
Shasta	11,868 76	41,319 26	34,730 21			39 25	87,957 51
Sierra	4,859 78	8,133 54	10,019 43	2,073 68			25,086 43
Siskiyou	9,779 37	36,938 65	29,585 71	1,630 58		588 79	78,523 10
Solano	24,264 66	49,184 09	37,174 00	6,156 29		15 00	116,794 04
Sonoma	47,588 23	94,956 85	66,027 57	4,575 51		375 55	213,523 71
Stanislaus	5,447 02	27,043 97	28,481 50	7,965 63	7,396 85	498 39	76,833 36
Sutter	4,849 06	13,068 48	15,773 37	618 94		92 90	34,402 75
Tehama	12,293 66	27,534 00	27,109 00	350 49	1,547 50	1,107 76	69,942 41
Trinity	1,584 74	7,390 84	6,016 41	804 18		437 26	16,233 43
Tulare	13,003 13	57,503 50	42,230 80	9,340 48	16,592 00	218 38	138,888 29
Tuolumne	10,143 97	21,519 50	15,875 33		1,500 00	322 30	49,361 10
Ventura	17,817 88	40,063 00	35,909 35		10,487 43		104,277 66
Yolo	15,831 08	31,086 13	24,531 50	636 85		428 85	72,514 41
Yuba	8,994 80	18,796 48	13,885 74			33 20	41,710 22
Totals	$14,514,510 73	$39,789,924 62	$520,852 41	$406,642 24	$1,597,755 89	$299,237 83	$10,254,931 90

TABLE No. 3—Continued.

Statement of Financial Statistics, showing the Receipts from all Sources of Revenue for the School Year ending June 30, 1906.

Counties.	Balance on Hand at Beginning of School Year.	Amount Received from State Apportionment.	Amount Received from County Taxes, as Apportioned by County Superintendents.	Amount Received from City or District Taxes.	Amount Received from Sale of Bonds.	Amount Received from Subscriptions and Miscellaneous Sources, as Reported by School Trustees.	Total Receipts from All Sources.
Alameda	$975,777 12	$307,851 73	$344,974 40	$63,603 02		$4,989 41	$1,697,195 68
Alpine	570 60	1,134 24	1,372 75				3,077 59
Amador	9,801 18	27,080 16	18,791 24			207 84	55,880 42
Butte	12,917 60	55,769 95	33,825 58	6,218 90	$8,007 00	1,607 00	118,346 03
Calaveras	8,749 03	30,857 74	18,541 01			212 01	58,359 79
Colusa	10,669 34	22,369 59	20,857 57				53,896 50
Contra Costa	41,321 95	49,732 95	42,432 95	2,340 68	18,980 20	470 33	155,279 06
Del Norte	2,077 47	8,459 02	5,384 57		2,000 00		17,921 06
El Dorado	7,229 81	26,477 70	16,911 65	708 40		32 65	51,360 21
Fresno	41,284 21	122,548 90	90,740 72	66,793 23	69,074 79	4,000 15	394,442 00
Glenn	3,770 42	16,330 79	16,689 15	2,792 35		9 45	39,592 16
Humboldt	27,290 91	79,900 00	65,045 00	3,216 87	68,753 75	1,236 00	245,532 53
Inyo	1,880 83	10,093 31	6,139 46				18,083 60
Kern	28,316 46	47,785 83	42,949 17	14,514 80	1,585 41	247 75	135,399 42
Kings	36,498 08	26,600 00	18,160 00	153 25	8,946 25	318 30	90,675 88
Lake	6,064 88	19,104 21	10,832 50		275 00		36,276 59
Lassen	4,266 62	15,336 00	14,093 00	810 48		85 00	34,591 10
Los Angeles	400,512 95	625,948 70	601,275 05	50,724 23	883,985 21	53,944 00	2,616,390 14
Madera	12,685 57	19,486 00	19,861 50	3,309 44		400 75	55,743 26
Marin	35,967 86	43,725 52	27,746 80	32 27	1,546 00	512 33	109,530 78
Mariposa	1,598 65	12,641 55	11,503 00				25,743 20
Mendocino	20,872 85	63,396 60	38,106 80	8,286 11	9,626 32	1,900 21	142,188 89
Merced	6,325 78	32,092 60	25,563 40	1,525 02		784 04	66,290 84
Modoc	1,589 05	17,712 10	10,712 92		1,050 00	102 94	31,167 01
Mono	3,100 97	4,640 61	4,508 50				12,250 08

Napa	15,077 00	36,080 44	24,366 20			267 64	79,339 34
Nevada	6,989 77	36,045 14	25,038 92	10,440 37		192 15	68,266 98
Orange	19,106 30	67,130 10	49,214 50	2,069 49	3,037 00		148,928 27
Placer	12,045 03	36,572 67	24,509 89		6,216 80	727 20	82,141 08
Plumas	6,499 28	11,825 70	9,659 39	14,900 10	8,250 00		36,234 37
Riverside	21,253 79	51,339 83	38,008 17	72,955 47		12,094 06	137,595 95
Sacramento	43,195 96	95,133 81	66,910 97			496 90	278,693 11
San Benito	11,333 69	22,540 08	20,078 21	21,503 99		139 23	54,091 21
San Bernardino	21,152 92	90,492 00	60,428 00	66,339 75	21,557 20	23,421 25	238,555 36
San Diego	30,629 30	94,908 20	59,636 30		9,390 60	2,174 06	263,078 21
San Francisco	5,123 86	627,557 97	490,835 43			59,120 70	1,182,637 96
San Joaquin	29,765 64	80,154 52	65,922 61	27,061 91	1,616 80	1 95	204,523 43
San Luis Obispo	41,245 93	52,984 00	40,556 00	2,799 41	6,850 00	189 65	144,624 99
San Mateo	24,254 39	34,841 34	28,039 49	750 76	52,417 95	250 00	140,553 93
Santa Barbara	36,869 98	51,519 70	50,445 00	1,124 04	63,378 98	1,724 26	205,061 96
Santa Clara	78,752 88	143,880 00	123,390 25	15,372 79	7,726 00	1,687 25	370,809 17
Santa Cruz	18,844 77	53,926 60	35,589 88	752 37		161 83	109,275 45
Shasta	12,507 52	52,238 84	36,231 16	76		738 94	101,717 22
Sierra	5,729 88	10,435 94	11,328 67	1,104 39			28,598 88
Siskiyou	11,593 53	48,172 95	28,532 90	2,636 76			90,936 14
Solano	22,715 21	50,732 50	41,449 80	6,641 07		142 00	121,680 58
Sonoma	47,363 43	112,967 44	75,583 31	2,366 08	111,634 51	322 75	350,237 52
Stanislaus	5,477 25	34,053 89	32,616 19	6,915 32	9,399 20	440 00	88,901 85
Sutter	4,876 39	17,051 17	15,676 50	1,066 61		15 25	38,685 92
Tehama	8,345 63	31,440 00	27,370 00			575 00	67,730 63
Trinity	1,485 90	9,731 70	6,089 00	9 48		358 50	17,654 58
Tulare	12,445 57	56,766 30	49,714 27	8,420 09	44,477 59		171,823 82
Tuolumne	8,088 79	25,336 57	15,823 43			136 50	49,385 23
Ventura	29,123 28	40,027 10	32,536 41	2,472 24			104,159 03
Yolo	9,798 97	34,251 85	26,434 27	1,517 99			72,003 08
Yuba	7,755 64	22,130 73	15,035 47			51 71	44,973 55
Totals	$2,329,252 95	$3,880,740 82	$3,179,964 81	$501,474 87	$1,426,596 06	$176,640 78	$11,494,670 29

TABLE No. 4.

Statement of Financial Statistics, showing School Expenditures for the School Year ending June 30, 1905.

Counties.	Amount Paid for Teachers' Salaries.	Amount Paid for Contingent Expenses, Supplies, Repairs, Rents, etc.	Amount Paid for Sites, Buildings, and Furniture.	Amount Paid for Library Books and Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Alameda	$507,940 50	$114,832 36	$274,963 24	$4,319 21	$902,055 31	$906,200 37
Alpine	1,576 50	276 20	10 77	13 50	1,876 97	570 60
Amador	31,829 55	5,466 39	2,039 83	1,036 36	40,372 13	9,847 16
Butte	64,384 40	22,066 58	7,041 24	2,205 78	95,698 00	12,921 62
Calaveras	37,554 30	5,217 51	1,053 38	1,524 06	45,349 25	8,740 51
Colusa	30,439 89	8,583 17	9,760 67	1,021 05	49,804 78	10,532 96
Contra Costa	69,401 68	13,893 02	14,430 63	2,293 87	100,019 20	41,316 95
Del Norte	9,741 75	1,900 77	1,168 97	273 97	13,085 46	2,483 97
El Dorado	32,010 17	4,520 26		508 96	37,039 39	7,445 76
Fresno	170,233 43	44,883 44	49,227 23	2,302 57	266,646 67	41,280 74
Glenn	24,116 55	4,672 81	3,024 27	1,257 44	33,071 07	3,793 56
Humboldt	107,823 75	23,242 77	26,215 78	3,717 85	161,000 15	27,297 33
Inyo	13,111 06	2,031 13	1,129 07	676 41	16,947 67	2,028 18
Kern	68,353 10	17,115 54	5,348 95	2,071 16	92,888 75	28,395 64
Kings	34,923 24	9,062 69	9,166 68	698 34	53,850 95	36,276 22
Lake	21,616 06	3,566 42	795 98	547 71	26,526 17	6,823 14
Lassen	19,467 50	4,330 29	399 51	855 70	25,053 00	4,954 48
Los Angeles	843,257 28	266,571 30	349,987 92	7,216 50	1,467,033 00	402,381 79
Madera	27,943 16	7,206 57	98 00	547 30	35,795 03	12,685 57
Marin	47,665 59	7,787 36	25,397 31	1,524 74	82,375 00	35,967 86
Mariposa	16,246 87	2,295 86	390 20	583 06	19,515 99	2,792 91
Mendocino	62,634 64	10,671 48	14,272 35	2,911 87	90,490 34	21,118 15
Merced	43,266 91	14,402 98	17,216 71	1,735 75	76,622 35	6,325 78
Modoc	21,476 01	4,185 23	472 75	1,417 72	27,551 71	3,114 15
Mono	7,761 25	1,095 13	219 80	218 47	9,294 65	3,100 97

Monterey	77,517 67	14,769 44	1,113 84	2,926 51	96,327 46	15,734 30
Napa	46,633 20	10,974 14	635 08	1,283 51	59,535 93	18,331 30
Nevada	50,094 80	13,554 34	5,543 50	1,330 74	70,523 38	6,950 34
Orange	87,545 06	21,416 47	20,418 92	1,457 53	130,837 98	22,908 60
Placer	48,557 83	8,797 55	4,186 51	1,200 80	62,742 69	12,319 17
Plumas	14,606 87	3,867 67	3,056 95	1,122 68	22,654 17	7,016 01
Riverside	74,766 75	29,105 06	3,585 07	1,678 25	109,135 13	21,415 07
Sacramento	155,484 57	49,903 99	21,253 65	1,426 87	228,069 08	43,391 82
San Benito	28,977 88	5,200 26	1,053 31	1,023 63	36,255 08	11,333 63
San Bernardino	117,796 20	41,410 65	35,133 21	1,954 41	196,294 47	21,152 99
San Diego	122,701 28	29,620 70	17,047 52	2,402 28	171,771 78	19,658 82
San Francisco	916,134 45	236,760 88	44,444 75	11,783 36	1,209,123 44	31,019 18
San Joaquin	121,417 77	31,442 81	6,800 96	3,197 53	162,859 07	13,052 20
San Luis Obispo	69,671 46	10,302 41	1,777 85	1,520 75	83,272 47	41,433 91
San Mateo	42,888 53	14,874 93	4,361 93	1,074 40	63,199 79	24,254 39
Santa Barbara	69,795 69	21,373 08	8,274 44	1,998 19	101,441 40	39,640 41
Santa Clara	206,471 17	53,486 78	25,230 78	4,558 63	289,747 36	78,754 73
Santa Cruz	71,056 50	15,686 85	1,842 50	935 95	89,521 80	18,844 77
Shasta	61,112 03	12,440 00		1,797 96	75,349 99	12,607 52
Sierra	14,629 58	2,971 46	1,348 37	406 48	19,355 89	5,730 54
Siskiyou	55,167 69	8,580 22	1,642 93	2,686 47	68,077 31	10,445 79
Solano	74,154 15	17,876 46	672 56	1,375 66	94,078 83	22,715 21
Sonoma	129,051 25	28,985 52	4,978 43	3,087 22	166,102 42	47,421 29
Stanislaus	46,001 75	15,037 62	8,658 42	1,658 32	71,356 11	5,477 25
Sutter	23,272 30	3,462 29	1,746 29	1,045 48	29,526 36	4,876 39
Tehama	44,027 14	12,510 87	3,529 68	901 62	60,969 31	8,973 10
Trinity	12,826 86	1,445 99	84 46	390 22	14,747 53	1,485 90
Tulare	86,456 91	19,855 16	16,102 10	3,204 35	125,618 52	13,269 77
Tuolumne	32,233 64	6,312 88	2,336 77	848 60	41,731 89	7,629 21
Ventura	58,247 39	13,864 94	1,501 47	1,540 58	75,154 38	29,123 28
Yolo	45,327 90	10,527 30	5,967 58	1,012 76	62,835 54	9,678 87
Yuba	26,695 79	6,128 81	407 69	713 60	33,945 89	7,764 33
Totals	$5,346,097 20	$1,372,424 79	$1,068,568 76	$105,034 69	$7,892,125 44	$2,362,806 46

TABLE No. 4—Continued.

Statement of Financial Statistics, showing School Expenditures for the School Year ending June 30, 1906.

Counties.	Amount Paid for Teachers' Salaries.	Amount Paid for Contingent Expenses, Supplies, Repairs, Rents, etc.	Amount Paid for Sites, Buildings, and Furniture.	Amount Paid for Library Books and Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Alameda	$521,875 15	$121,505 03	$429,107 35	$4,706 62	$1,077,194 15	$620,001 53
Alpine	1,594 25	276 59	104 85	42 77	2,018 46	1,059 13
Amador	32,913 73	5,690 16	1,863 96	1,189 24	41,657 09	14,223 33
Butte	74,524 48	18,187 57	12,421 97	1,561 98	106,696 00	11,650 03
Calaveras	38,886 50	6,261 01	387 30	1,678 21	47,210 02	11,149 77
Colusa	33,229 47	7,832 80		787 58	41,849 85	12,046 65
Contra Costa	74,817 90	15,735 69	31,159 43	2,747 23	124,460 25	30,818 81
Del Norte	11,170 00	1,570 06	1,816 48	224 45	14,780 99	3,140 07
El Dorado	33,863 37	4,883 84	1,155 65	951 63	40,854 49	10,505 72
Fresno	197,476 65	48,665 57	80,158 16	3,898 40	330,198 78	64,243 22
Glenn	26,571 25	7,417 14	57 69	1,058 69	35,104 77	4,487 39
Humboldt	109,268 85	25,288 74	46,147 63	2,058 95	182,764 17	62,768 36
Inyo	13,250 21	2,716 68		186 85	16,153 74	1,929 86
Kern	73,854 24	16,749 35	26,294 12	1,795 94	118,693 65	16,705 77
Kings	38,951 34	12,718 51	22,887 85	723 37	75,281 07	15,394 81
Lake	24,042 95	4,307 58	288 40	458 33	29,097 26	7,179 33
Lassen	20,625 00	3,376 12		393 04	24,394 16	10,196 94
Los Angeles	889,553 51	305,699 01	392,625 24	7,145 52	1,595,023 28	1,021,366 86
Madera	30,036 84	6,715 35	227 85	1,237 84	38,217 88	17,525 38
Marin	51,907 45	8,825 80	19,990 89	1,256 75	81,980 89	27,549 89
Mariposa	17,447 40	2,301 56	302 92	454 41	20,506 29	5,236 91
Mendocino	81,919 30	12,583 77	12,754 96	2,719 86	109,977 89	32,211 00
Merced	45,393 14	12,071 21	1,290 68	1,858 77	60,613 83	5,677 01
Modoc	21,908 55	3,603 51	18 69	666 69	26,197 44	4,969 57
Mono	7,763 15	1,514 71		259 82	9,537 68	2,712 40

Placer	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Plumas	13,664 53	3,627 32	8,836 91	1,082 95	27,211 71	9,022 66
Riverside	79,501 10	25,838 69	10,487 88	1,647 09	117,474 76	20,121 19
Sacramento	160,211 54	44,489 89	14,886 12	1,666 22	221,253 77	57,439 34
San Benito	31,250 13	6,104 44	186 45	664 50	38,205 52	15,885 69
San Bernardino	130,628 00	38,641 25	13,183 66	2,077 28	184,530 19	54,025 17
San Diego	152,336 94	42,544 92	22,309 91	2,251 04	219,442 81	43,635 40
San Francisco	919,972 70	275,867 23	45,061 07	17,794 49	1,258,695 49	*76,057 53
San Joaquin	133,813 70	31,450 35	6,857 40	3,030 91	175,152 36	29,371 07
San Luis Obispo	74,177 40	12,585 53	4,591 81	1,348 01	92,702 75	51,922 24
San Mateo	45,307 75	14,649 33	24,056 42	1,328 87	85,342 37	55,211 56
Santa Barbara	79,829 80	20,541 87	63,868 12	1,512 39	165,752 18	39,309 78
Santa Clara	214,524 67	56,777 07	33,691 23	4,766 66	309,759 63	61,049 54
Santa Cruz	72,495 05	16,430 38	2,326 35	658 80	91,910 58	17,364 87
Shasta	68,569 95	12,931 98		1,468 12	82,970 05	18,747 17
Sierra	15,660 29	3,528 67	261 43	682 76	20,133 15	8,465 73
Siskiyou	61,565 80	7,941 10	2,270 86	2,138 29	73,906 05	17,020 09
Solano	76,324 03	16,929 79	2,436 43	981 64	96,671 89	25,008 69
Sonoma	142,770 39	30,692 92	59,229 25	2,804 38	235,496 94	114,740 58
Stanislaus	50,927 28	15,132 66	9,042 07	1,453 43	76,555 48	12,346 41
Sutter	25,641 99	3,723 80	2,160 08	739 07	32,264 94	6,420 98
Tehama	44,340 50	11,381 79	2,196 01	661 11	58,579 41	9,151 22
Trinity	13,157 16	1,253 44	195 65	359 76	14,966 01	2,688 57
Tulare	90,788 28	19,222 39	30,957 61	2,663 43	143,631 71	28,192 11
Tuolumne	32,372 32	7,086 96		776 60	40,235 88	9,149 35
Ventura	59,571 96	13,251 69	11,594 24	1,337 70	85,755 59	18,408 44
Yolo	47,720 75	9,977 84	420 21	790 32	58,909 12	13,093 96
Yuba	29,403 16	5,533 93	214 70	695 83	35,847 62	9,125 93
Totals	$5,666,045 33	$1,480,097 32	$1,474,716 24	$106,149 54	$8,727,008 43	$2,767,661 86

*Overdrawn.

TABLE No. 5.

Valuation of School Property, 1905.

Counties.	Valuation of Lots, School Houses, and Furniture. (Primary and Grammar Schools.)	Valuation of School Libraries. (Primary and Grammar Schools.)	Valuation of School Apparatus. (Primary and Grammar Schools.)	Total Valuation of School Property. (Primary and Grammar Schools.)	No. of Districts Voting a Special School Tax.	Bonded or Other Indebtedness of the District.
Alameda	$2,736,900	$24,772	$13,992	$2,775,664	2	
Alpine	3,100	480	415	3,995		
Amador	74,988	10,020	6,487	91,495	1	
Butte	172,681	10,861	4,674	188,216	3	$12,600 00
Calaveras	73,955	13,703	5,205	92,863	1	8,820 00
Colusa	85,530	9,660	2,431	97,621		
Contra Costa	193,225	15,560	4,285	213,070	1	59,275 00
Del Norte	13,180	2,399	1,172	16,751	2	
El Dorado	53,225	10,694	5,220	69,139	2	800 00
Fresno	461,635	22,546	10,571	494,752	10	132,999 00
Glenn	51,350	6,275	1,625	59,250	2	
Humboldt	220,835	13,690	7,280	241,805	8	15,900 00
Inyo	43,659	3,720	962	48,341	7	7,900 00
Kern	239,385	10,931	3,230	253,546	7	91,000 00
Kings	94,700	3,725	1,215	99,640	3	
Lake	35,550	3,480	1,565	40,595	1	400 00
Lassen	33,400	4,875	2,390	40,665		8,200 00
Los Angeles	3,804,872	47,327	29,132	3,881,331	24	1,660,780 00
Madera	53,900	8,665	2,180	64,745	3	2,500 00
Marin	157,970	7,564	2,990	168,524	8	73,220 00
Mariposa	19,890	1,700	450	22,040		
Mendocino	185,450	30,650	16,645	232,745	1	19,650 00
Merced	130,345	12,390	3,565	146,300	4	51,000 00
Modoc	35,150	5,335	2,201	42,686	1	
Mono	8,720	2,819	740	12,279		
Monterey	222,075	30,675	10,175	262,925		31,900 00
Napa	138,505	11,515	5,221	155,241	2	
Nevada	144,395	13,490	5,540	163,425		
Orange	352,600	24,505	7,720	384,825		38,700 00
Placer	107,465	12,085	4,267	123,817	3	3,923 00
Plumas	20,180	5,600	2,720	28,500		10,500 00
Riverside	259,255	13,052	5,565	277,872	13	57,800 00
Sacramento	490,594	17,508	6,436	514,538	5	10,600 00
San Benito	65,300	6,250	3,250	74,800		
San B'nardino	520,701	21,742	10,285	552,728	8	161,500 00
San Diego	385,592	23,543	9,251	418,386	7	12,168 60
San Francisco	6,818,909	25,000	35,500	6,879,409		
San Joaquin	460,125	23,839	7,010	490,974	3	28,855 00
San L. Obispo	175,010	14,255	5,590	194,855	2	3,800 00
San Mateo	204,600	19,600	8,700	232,900	2	5,000 00
Santa Barbara	191,600	14,335	5,435	211,370	2	81,800 00
Santa Clara	754,126	26,769	12,608	793,503	1	221,200 00
Santa Cruz	182,200	13,000	6,500	201,700		11,500 00
Shasta	168,280	23,100	10,240	201,620		
Sierra	34,000	3,711	2,108	39,819		859 30
Siskiyou	93,191	18,085	8,878	120,154	1	
Solano	162,200	15,560	6,030	183,790	5	
Sonoma	321,335	50,371	19,507	391,213	23	75,840 00
Stanislaus	143,450	15,160	6,820	165,430	6	32,600 00
Sutter	57,225	5,700	1,917	64,842	2	
Tehama	129,480	10,640	4,510	144,630		13,700 00
Trinity	20,356	1,600	605	22,561	1	
Tulare	238,250	25,785	14,840	278,875	9	16,975 00
Tuolumne	43,220	8,250	3,750	55,220		7,083 00
Ventura	208,150	11,550	6,650	226,350	3	23,700 00
Yolo	125,860	9,120	3,015	137,995		
Yuba	48,850	8,450	3,910	61,210		13,000 00
Totals	$22,270,674	$807,686	$375,175	$23,453,535	189	$2,908,047 90

TABLE No. 5—Continued.

Valuation of School Property, 1906.

Counties.	Valuation of Lots, School Houses, and Furniture. (Primary and Grammar Schools.)	Valuation of School Libraries. (Primary and Grammar Schools.)	Valuation of School Apparatus. (Primary and Grammar Schools.)	Total Valuation of School Property. (Primary and Grammar Schools.)	Number of Districts Voting a Special School Tax.	Bonded or Other Indebtedness of the District.
Alameda	$2,748,674	$24,773	$13,877	$2,787,324	3	$1,336,625
Alpine	3,100	480	415	3,995		
Amador	76,658	9,671	6,278	92,607		
Butte	187,075	11,670	4,723	203,468	2	
Calaveras	73,232	13,065	5,255	91,552		6,840
Colusa	86,800	10,185	2,436	99,421		
Contra Costa	203,480	14,545	4,060	222,085	2	70,900
Del Norte	14,925	2,435	1,212	18,572		
El Dorado	48,550	8,877	4,228	61,655		600
Fresno	682,906	21,720	12,906	717,532	6	184,155
Glenn	54,275	6,775	1,750	62,800	2	
Humboldt	289,955	13,740	7,395	311,090	8	75,300
Inyo	43,259	3,700	952	47,911	6	7,350
Kern	262,158	12,268	3,892	278,318	8	90,900
Kings	118,820	4,000	1,855	124,675	2	
Lake	36,320	3,500	1,585	41,405		275
Lassen	33,300	4,870	2,280	40,450		7,100
Los Angeles	4,636,774	52,920	25,321	4,715,015	12	1,585,920
Madera	52,835	6,705	2,170	61,710	1	2,500
Marin	167,205	9,870	2,995	180,070		65,100
Mariposa	19,890	1,680	460	22,030		
Mendocino	184,650	30,335	17,075	232,060	1	23,350
Merced	129,755	13,528	3,678	146,961	3	
Modoc	35,990	5,999	2,201	44,190		1,050
Mono	8,720	2,819	740	12,279		
Monterey	229,450	34,800	8,950	273,200	4	
Napa	138,005	11,665	5,116	154,786		18,200
Nevada	143,365	13,190	5,540	162,095		
Orange	358,355	23,380	8,206	389,941	7	40,000
Placer	106,543	12,115	3,865	122,523		9,000
Plumas	28,900	5,025	2,900	36,825		7,750
Riverside	266,525	14,130	6,260	286,915	7	41,800
Sacramento	503,833	17,762	6,828	528,423	9	9,950
San Benito	62,350	5,025	3,075	70,450		
San Bernardino	524,742	23,153	10,501	558,396	8	187,500
San Diego	405,566	24,199	9,700	439,465	11	1,199
San Francisco	5,791,552	25,798	33,765	5,851,115		
San Joaquin	480,970	26,550	6,805	514,325	1	32,455
San Luis Obispo	175,470	14,675	5,945	196,090	3	
San Mateo	227,800	20,700	9,300	257,800	3	55,100
Santa Barbara	225,485	14,920	5,865	246,270	3	73,755
Santa Clara	662,897	31,384	11,368	705,649	2	107,050
Santa Cruz	185,500	13,825	7,925	207,250	2	6,000
Shasta	193,450	29,830	11,235	234,515		7,763
Sierra	35,152	3,637	2,134	40,923		
Siskiyou	92,941	16,750	8,723	118,414	9	
Solano	165,750	15,640	6,140	187,530	4	
Sonoma	373,080	50,578	22,040	445,698	23	102,010
Stanislaus	157,874	16,181	7,095	181,150	5	14,900
Sutter	62,115	6,130	2,292	70,537	3	
Tehama	130,030	10,330	4,905	145,265		
Trinity	20,350	1,565	575	22,490		
Tulare	286,050	28,605	15,790	310,445	5	65,750
Tuolumne	42,500	8,300	4,575	55,375		4,616
Ventura	208,150	11,550	6,650	226,350	3	21,225
Yolo	126,139	10,086	3,046	139,271		
Yuba	49,700	8,115	3,870	61,685		12,000
Totals	$22,639,895	$839,723	$380,723	$23,860,341	168	$4,275,988

TABLE No. 10—APPORTIONMENT OF THE STATE SCHOOL FUND.

Comparison of the Apportionment of the State School Fund for the Fiscal Year ending June 30, 1906, under the Present Law, approved March 6, 1905, with the Same Amount of Money Apportioned under the Old Law, apportioning Money on Census Basis.

Counties.	A Decrease by Counties Under New Law, with Amount of Decrease.	B Counties Gaining Under New Law, and Amount of Gain.	C Number Teachers Employed in Each County in Primary and Grammar Schools, June 30, 1905.	D Average Amount Received per Teacher on Number Employed.	E Decrease per Teacher Employed.	F Gain per Teacher Employed.
Alameda	$24,781 75		583	$558 61	$42 33	
Alpine		$587 61	3	387 62		$195 87
Amador		5,643 58	63	458 06		89 58
Butte		8,698 95	116	489 95		74 99
Calaveras		6,911 15	68	479 44		101 63
Colusa		6,268 56	52	468 79		120 93
Contra Costa		3,478 20	96	553 69		36 23
Del Norte		2,019 25	19	470 10		106 28
El Dorado		9,097 83	69	403 72		131 85
Fresno		14,546 06	266	506 04		54 76
Glenn		5,640 08	45	394 43		125 44
Humboldt		10,536 58	165	521 10		63 85
Inyo		1,330 25	22	462 43		60 46
Kern		8,123 66	106	477 30		76 63
Kings		1,560 90	53	533 29		29 52
Lake		5,234 70	45	435 47		116 32
Lassen		3,576 96	37	412 36		96 67
Los Angeles	40,051 23		1,142	544 42	35 07	
Madera		4,745 68	45	441 07		105 45
Marin	2,440 03		74	501 69	33 24	
Mariposa		4,647 27	33	398 46		140 82
Mendocino		13,678 48	146	441 88		93 68
Merced		8,447 98	76	450 35		111 14
Modoc		4,689 21	41	444 68		114 37
Mono		414 81	12	378 25		34 56
Monterey		11,417 70	132	451 53		86 49
Napa		6,804 39	79	497 60		86 13
Nevada		5,276 96	77	503 61		68 51
Orange		1,925 41	136	498 79		14 15
Placer		8,523 46	83	471 66		102 69
Plumas		3,207 45	30	393 89		106 91
Riverside		6,676 65	123	497 39		54 28
Sacramento		7,764 34	219	465 67		35 45
San Benito		6,618 33	52	433 46		127 27
San Bernardino		241 86	189	469 17		1 27
San Diego		12,606 98	216	443 12		58 36
San Francisco	243,500 00		1,059	673 96	230 02	
San Joaquin		7,971 15	169	512 69		47 20
San Luis Obispo		9,627 56	121	467 95		79 56
San Mateo		125 71	70	497 51		1 79
Santa Barbara		4,552 03	110	500 07		41 38
Santa Clara	3,864 95		295	512 70	13 10	
Santa Cruz	228 78		118	460 60	1 93	
Shasta		15,785 52	125	430 83		126 28
Sierra		3,616 73	24	477 72		150 69
Siskiyou		10,788 48	105	454 30		102 74
Solano		3,223 27	112	478 84		28 77
Sonoma		7,073 60	217	506 75		32 50
Stanislaus		8,159 84	81	471 23		100 73
Sutter		5,928 81	41	461 36		144 60
Tehama		7,564 63	79	440 46		99 51
Trinity		2,670 90	25	389 58		106 83
Tulare		13,317 00	154	474 70		86 47
Tuolumne		4,630 57	54	511 03		85 75
Ventura		1,779 96	88	461 08		20 22
Yolo		7,023 91	77	480 71		91 21
Yuba		4,414 07	47	481 53		93 91
Totals	$314,866 74	$319,195 05	7,884	*$519 11		

*Average.

TABLE No. 6—STATE SCHOOL FUND—Continued.

The amount of money in the State Treasury to the credit of the State School Fund subject to apportionment, is as follows:

Amount unapportioned July 8, 1904		$2,910 57
Received from property tax		1,856,942 18
Received from poll tax		339,735 73
Received from tax on railroads		62,361 93
Received from tax on collateral inheritances		418,491 09
Received from interest on bonds		73,917 85
Received from interest on State lands		14,588 10
Total		$2,768,947 45
Less amount paid on restitution of interest on lands sold not the property of the State	$31 55	
Less amount paid for annulment of certificates of purchase	55 10	86 65
Net amount subject to apportionment		$2,768,860 80

Respectfully submitted.

E. P. COLGAN, State Controller.

OFFICE OF STATE CONTROLLER,
SACRAMENTO, CAL., July 3, 1905.

HON. THOS. J. KIRK, *Superintendent of Public Instruction.*

DEAR SIR: In compliance with law, I have the honor to report as follows: The securities held in trust by the State Treasurer for the support of Common Schools consist of bonds of the State of California, aggregating one million seven hundred and twenty-six thousand five hundred ($1,726,500) dollars, together with bonds of the various counties of this State, amounting to two million two hundred and ten thousand two hundred ($2,210,200) dollars, and bonds of various municipalities of this State, amounting to nine hundred and eighty-nine thousand five hundred fifty ($989,550) dollars, described as follows:

STATE BONDS.			
State Funded Debt Bonds of 1873	6	per cent	$1,526,500 00
San Francisco Depot Bonds	4	"	200,000 00
COUNTY BONDS.			
Alameda County (Oakland School District) Bonds	4	"	320,000 00
Fresno County Bonds	6	"	51,000 00
Glenn County Bonds	4½	"	23,000 00
Humboldt County Bonds	7	"	13,000 00
Kern County Bonds	4½	"	235,000 00
Kings County Bonds	4	"	15,000 00
Lake County Bonds	5	"	40,000 00
Los Angeles County Bonds	4½	"	28,000 00
Los Angeles County Bonds	5	"	96,000 00
Los Angeles County (Pomona High School) Bonds	4	"	52,250 00
Los Angeles County (Pasadena City School District) Bonds	4	"	50,000 00
Marin County Bonds	4	"	101,000 00
Mendocino County Bonds	4	"	87,500 00
Merced County Bonds	4	"	43,000 00
Monterey County Bonds	4	"	104,000 00
Placer County Bonds	5	"	11,000 00
Riverside County Bonds	4	"	150,000 00
Sacramento County Bonds	4	"	68,000 00
Sacramento County Bonds	4½	"	233,000 00
San Bernardino County (Redlands, Lugonia, and Crafton High School) Bonds	5	"	60,000 00
San Diego County Bonds	5	"	53,300 00
San Diego County Bonds	4½	"	10,000 00
San Francisco City and County School Bonds	3½	"	269,400 00
San Joaquin County Bonds	4	"	2,000 00
San Joaquin County Bonds	5	"	29,000 00
Santa Cruz County Bonds	4½	"	12,000 00
Shasta County Bonds	5	"	30,000 00
Tulare County (Porterville High School) Bonds	5	"	23,750 00

TABLE No. 6—STATE SCHOOL FUND—Continued.

MUNICIPAL BONDS.			
Antioch Town Water Works Bonds	5	per cent	$28,600
Bakersfield City Bonds	4	"	35,000
Bishop Town Improvement Bonds	6	"	39,600
Long Beach Pier Bonds	5	"	95,500
Los Angeles City School Bonds	3½	"	456,000
Mountain View Town Bonds	4½	"	28,000
Napa City Bonds	4	"	33,600
Pomona Park and School Bonds	4	"	55,750
Sacramento City Levee and Sewer Bonds	4	"	165,000
San Buenaventura City Bonds	5	"	15,000
Yreka Town Water Works Bonds	5	"	37,500
			$4,926,250

The amount of money in the State Treasury to the credit of the State School Fund subject to apportionment, is as follows:

Amount unapportioned January 7, 1905		$2,628
Received from property tax		764,589
Received from poll tax		189,178
Received from property tax on railroads		61,649
Received from tax on collateral inheritances		114,269
Received from interest on bonds held in trust		118,901
Received from interest on State school lands		10,997
Total		$1,262,214
Less amount paid on restitution of interest on school lands sold not the property of the State	$562 33	
Less amount paid for annulment of certificates of purchase	60 73	
Less amount refunded on collateral inheritance tax	47 50	670 56
Net amount subject to apportionment		$1,261,543 85

Respectfully submitted.

E. P. COLGAN, State Controller.

OFFICE OF STATE CONTROLLER,
SACRAMENTO, CAL., January 2, 1906.

HON. THOS. J. KIRK, *Superintendent of Public Instruction.*

DEAR SIR: In compliance with law, I have to report as follows: The securities held in trust by the State Treasurer for the support of Common Schools consist of bonds of the State of California, aggregating one million seven hundred and twenty-six thousand five hundred ($1,726,500) dollars, together with bonds of the various counties of this State, amounting to two million one hundred and thirty-four thousand nine hundred and fifty ($2,134,950) dollars, and bonds of various municipalities of this State, amounting to nine hundred and eighty-six thousand two hundred ($986,200) dollars, described as follows:

STATE BONDS.			
State Funded Debt Bonds of 1873	6	per cent	$1,526,500 00
San Francisco Depot Bonds	4	"	200,000 00
COUNTY BONDS.			
Alameda County (Oakland School District) Bonds	4	"	312,000 00
Glenn County Bonds	4½	"	23,000 00
Humboldt County Bonds	7	"	13,000 00
Kern County Bonds	4½	"	235,000 00
Kings County Bonds	4	"	13,000 00
Lake County Bonds	5	"	37,000 00
Los Angeles County Bonds	4½	"	20,000 00
Los Angeles County Bonds	5	"	90,000 00
Los Angeles County (Pomona High School) Bonds	4	"	49,500 00
Los Angeles County (Pasadena City School District) Bonds	4	"	50,000 00
Marin County Bonds	4	"	96,000 00
Mendocino County Bonds	4	"	85,000 00
Merced County Bonds	4	"	43,000 00
Monterey County Bonds	4	"	104,000 00

TABLE No. 6—STATE SCHOOL FUND—Continued.

COUNTY BONDS—*Continued.*			
Placer County Bonds	5	per cent	$11,000 00
Riverside County Bonds	4	"	150,000 00
Sacramento County Bonds	4	"	68,000 00
Sacramento County Bonds	4½	"	233,000 00
San Bernardino County (Redlands, Lugonia, and Crafton High School) Bonds	5	"	60,000 00
San Diego County Bonds	5	"	53,300 00
San Francisco City and County School Bonds	3½	"	269,400 00
San Joaquin County Bonds	4	"	2,000 00
San Joaquin County Bonds	5	"	29,000 00
Shasta County Bonds	5	"	30,000 00
Sonoma County (Healdsburg School District) Bonds	4	"	35 000 00
Tulare County (Porterville High School) Bonds	5	"	23,750 00
MUNICIPAL BONDS.			
Antioch Town Water Works Bonds	5	"	27,200 00
Bakersfield City Bonds	4	"	33,000 00
Bishop Town Improvement Bonds	6	"	39,600 00
Long Beach Pier Bonds	5	"	95,000 00
Los Angeles City School Bonds	3½	"	456,000 00
Mountain View Town Bonds	4½	"	27,300 00
Napa City Bonds	4	"	33,600 00
Pomona Park and School Bonds	4	"	57,000 00
Sacramento City Levee and Sewer Bonds	4	"	165,000 00
San Buenaventura City Bonds	5	"	15,000 00
Yreka Town Water Works Bonds	5	"	37,500 00
Total			$4,847,650 00

The amount of money in the State Treasury to the credit of the State School Fund, subject to apportionment, is as follows:

Amount unapportioned July 3, 1905		$2,684 03
Received from property tax		2,019,192 60
Received from poll tax		356,449 71
Received from property tax on railroads		64,814 93
Received from tax on collateral inheritances		138,957 79
Received from interest on bonds held in trust		94,812 43
Received from interest on State school lands		18,192 32
Total		$2,695,103 81
Less amount paid on restitution of interest on school lands sold not the property of the State	$1,015 37	
Less amount paid for annulment of certificates of purchase	3 07	
Less amount refunded on collateral inheritance tax	45 12	1,063 56
Net amount subject to apportionment		$2,694,040 25

Respectfully submitted.

E. P. COLGAN, State Controller.

OFFICE OF STATE CONTROLLER,
SACRAMENTO, CAL., July 2, 1906.

HON. THOS. J. KIRK, *Superintendent of Public Instruction.*

DEAR SIR: In compliance with the law, I have to report as follows: The securities held in trust by the State Treasurer for the support of Common Schools consist of bonds of the State of California, aggregating one million seven hundred and twenty-six thousand five hundred ($1,726,500) dollars, together with bonds of the various counties of this State, amounting to two million forty-seven thousand two hundred ($2,047,200) dollars, and bonds of various municipalities of this State, amounting to nine hundred and sixty-three thousand three hundred ($963,300) dollars, and described in detail as follows:

STATE BONDS.				
State Funded Debt Bonds of 1873	6	per cent	$1,526,500 00	
San Francisco Depot Bonds	4	"	200,000 00	
				$1,726,500 00

TABLE No. 6—STATE SCHOOL FUND—Continued.

COUNTY BONDS.				
Alameda County (Oakland School District) Bonds	4	per cent	$312,000 00	
Glenn County Bonds	4½	"	18,000 00	
Humboldt County Bonds	7	"	13,000 00	
Kern County Bonds	4½	"	235,000 00	
Lake County Bonds	5	"	37,000 00	
Los Angeles County Bonds	5	"	73,000 00	
Los Angeles County Bonds	4½	"	10,000 00	
Los Angeles County (Pomona High School) Bonds	4	"	46,750 00	
Los Angeles County (Pasadena City School District) Bonds	4	"	50,000 00	
Marin County Bonds	4	"	96,000 00	
Mendocino County Bonds	4	"	85,000 00	
Merced County Bonds	4	"	43,000 00	
Monterey County Bonds	4	"	98,000 00	
Placer County Bonds	5	"	11,000 00	
Riverside County Bonds	4	"	150,000 00	
Sacramento County Bonds	4	"	68,000 00	
Sacramento County Bonds	4½	"	208,000 00	
San Bernardino County (Redlands, Lugonia, and Crafton High School) Bonds	5	"	60,000 00	
San Diego County Bonds	5	"	38,300 00	
San Francisco City and County School Bonds	3½	"	269,400 00	
San Joaquin County Bonds	5	"	25,000 00	
Shasta County Bonds	5	"	25,000 00	
Sonoma County (Healdsburg School District) Bonds	4	"	33,250 00	
Stanislaus County (Oakdale Union High School) Bonds	5	"	20,000 00	
Tulare County (Porterville High School) Bonds	5	"	22,500 00	
				$2,047,200 00
MUNICIPAL BONDS.				$3,773,700 00
Antioch Town Water Works Bonds	5	"	$27,200 00	
Bakersfield City Bonds	4	"	31,000 00	
Bishop Town Improvement Bonds	6	"	39,600 00	
Long Beach Pier Bonds	5	"	95,000 00	
Los Angeles City School Bonds	3½	"	444,000 00	
Mountain View Town Bonds	4½	"	27,300 00	
Napa City Bonds	4	"	32,200 00	
Pomona City Park and School Bonds	4	"	55,500 00	
Sacramento City Levee and Sewer Bonds	4	"	160,000 00	
San Buenaventura City Bonds	5	"	14,000 00	
Yreka Town Water Works Bonds	5	"	37,500 00	
				963,300 00
Total				$4,737,000 00

The amount of money in the State Treasury to the credit of the State School Fund, subject to apportionment, is as follows:

Amount unapportioned January 2, 1906		$93 32
Received from property tax		846,556 16
Received from poll tax		248,227 79
Received from property tax on railroads		64,352 43
Received from tax on collateral inheritances		111,042 21
Received from interest on bonds held in trust		119,372 75
Received from interest on State school lands		10,820 17
Total		$1,400,464 83
Less amount paid on restitution of interest on school lands sold not the property of the State	$609 62	
Less amount paid for annulment of certificates of purchase	11 22	620 84
Net amount subject to apportionment		$1,399,843 99

Respectfully submitted.

E. P. COLGAN, State Controller.

TABLE No. 7.

Statement, by Counties, of Apportionment of State School Moneys for the School Year ending June 30, 1905.

Counties.	Total Number of Census Children June 30, 1904.	Amount Apportioned January 7, 1905. Rate per child, $6.79.	Amount Apportioned July 5, 1905. Rate per child, $3.09.
Alameda	34,939	$237,235 81	$107,961 51
Alpine	78	529 62	241 02
Amador	2,389	16,221 31	7,382 01
Butte	4,677	31,756 83	14,451 93
Calaveras	2,631	17,864 49	8,129 79
Colusa	1,858	12,615 82	5,741 22
Contra Costa	4,897	33,250 63	15,131 73
Del Norte	678	4,603 62	2,096 02
El Dorado	1,886	12,805 94	5,827 74
Fresno	11,836	80,366 44	36,573 24
Glenn	1,257	8,535 03	3,884 13
Humboldt	7,609	51,665 11	23,511 81
Inyo	909	6,172 11	2,808 81
Kern	4,289	29,122 31	13,253 01
Kings	2,803	19,032 37	8,661 27
Lake	1,534	10,415 86	4,740 06
Lassen	1,093	7,421 47	3,377 37
Los Angeles	60,496	410,767 84	186,932 64
Madera	1,516	10,293 64	4,684 44
Marin	3,873	26,297 67	11,967 57
Mariposa	914	6,206 06	2,824 26
Mendocino	5,117	34,744 43	15,811 53
Merced	2,646	17,966 34	8,176 14
Modoc	1,392	9,451 68	4,301 28
Mono	411	2,790 69	1,269 99
Monterey	5,284	35,878 36	16,327 56
Napa	3,449	23,418 71	10,657 41
Nevada	3,463	23,513 77	10,700 67
Orange	6,800	46,172 00	21,012 00
Placer	3,200	21,728 00	9,888 00
Plumas	908	6,165 32	2,805 72
Riverside	5,548	37,670 92	17,143 32
Sacramento	9,926	67,397 54	30,671 34
San Benito	1,675	11,373 25	5,175 75
San Bernardino	8,927	60,614 33	27,584 43
San Diego	8,318	56,479 22	25,702 62
San Francisco	97,353	661,026 87	300,820 77
San Joaquin	7,726	52,459 54	23,873 34
San Luis Obispo	4,723	32,069 17	14,594 07
San Mateo	3,363	22,834 77	10,391 67
Santa Barbara	4,974	33,773 46	15,369 66
Santa Clara	15,535	105,482 65	48,003 15
Santa Cruz	5,604	38,051 16	17,316 36
Shasta	4,156	28,219 24	12,842 04
Sierra	822	5,581 38	2,539 98
Siskiyou	3,835	26,039 65	11,850 15
Solano	4,919	33,400 01	15,199 71
Sonoma	10,153	68,938 87	31,372 77
Stanislaus	2,819	19,141 01	8,710 71
Sutter	1,337	9,078 23	4,131 33
Tehama	2,818	19,134 22	8,707 62
Trinity	735	4,990 65	2,271 15
Tulare	5,899	40,054 21	18,227 91
Tuolumne	2,338	15,875 02	7,224 42
Ventura	4,098	27,825 42	12,662 82
Yolo	3,123	21,205 17	9,650 07
Yuba	1,842	12,507 18	5,691 78
Totals	407,398	$2,766,232 42	$1,258,859 82

TABLE No. 12.

Statistical Summary, by years, of the Kindergarten, Primary and Grammar, and High Schools of California, from 1851 to 1906, inclusive.

Years.	Number of Children Listed by Census Marshals.	Number of Children Under Five Years of Age.	Number of Census Children in Private Schools.	Number of Teachers.	Number of Children Enrolled on School Register.	Average Daily Attendance.
1851	5,906	.....	.....	.....	1,846	.....
1852	17,821	.....	.....	.....	3,314	.....
1853	19,442	.....	.....	.....	4,193	2,020
1854	20,075	.....	.....	214	9,746	4,635
1855	26,077	.....	.....	301	.....	6,442
1856	30,039	.....	.....	392	.....	8,495
1857	35,722	.....	.....	486	17,232	9,717
1858	40,530	23,558	.....	517	19,822	11,183
1859	48,676	28,300	.....	744	23,519	13,364
1860	57,917	30,932	5,438	831	26,993	14,750
1861	68,395	35,334	6,306	932	31,786	17,804
1862	71,821	38,127	6,886	962	36,566	19,262
1863	78,055	39,081	9,158	919	36,540	19,992
1864	86,031	41,323	11,359	1,079	47,588	24,794
1865	95,067	42,733	12,478	1,155	50,089	29,592
1866	84,179	52,037	15,671	1,268	50,273	.....
1867	94,213	52,975	14,026	1,389	62,227	.....
1868	104,118	58,119	14,820	1,590	65,828	43,681
1869	112,743	57,983	16,273	1,687	73,754	49,802
1870	121,751	62,940	16,198	1,869	85,808	54,271
1871	130,116	66,292	15,524	2,052	91,332	64,286
1872	137,351	69,723	13,787	2,301	94,720	65,700
1873	141,610	70,086	12,507	2,336	107,593	69,461
1874	159,717	73,876	14,149	2,452	120,240	72,283
1875	171,563	78,650	15,021	2,693	130,930	78,027
1876	184,787	83,595	14,625	2,894	140,468	83,391
1877	200,067	88,951	15,344	3,077	147,863	89,539
1878	205,475	85,061	15,310	3,393	154,064	94,696
1879	216,404	86,633	15,432	3,453	156,769	98,468
1880	215,978	87,635	14,953	3,595	158,765	100,966
1881	211,237	88,068	13,898	3,737	163,855	105,541
1882	216,330	86,490	14,572	3,777	168,024	107,177
1883	222,846	86,709	15,957	3,930	174,611	112,594
1884	235,672	87,643	17,953	4,083	179,801	124,814
1885	250,097	89,758	19,519	4,242	184,001	116,028
1886	259,973	92,507	18,919	4,444	189,220	125,718
1887	272,448	89,940	22,661	4,888	196,907	129,297
1888	270,500	98,203	20,768	4,938	207,050	132,277
1889	275,302	104,174	21,044	5,255	215,905	143,733
1890	280,882	106,302	21,460	5,434	221,756	146,589
1891	285,775	110,270	22,587	5,659	229,986	153,599
1892	294,033	112,423	20,886	5,891	238,106	158,875
1893	302,474	115,886	22,164	6,136	232,501	157,673
1894	313,637	119,201	21,779	6,257	235,837	164,664
1895	323,130	122,637	20,502	6,589	241,322	170,861
1896	330,709	124,113	21,405	6,885	249,335	176,083
1897	340,952	123,994	20,770	7,190	247,061	180,209
1898	347,624	120,939	20,620	7,432	259,459	185,424
1899	350,124	118,642	22,957	7,366	265,364	196,540
1900	361,157	116,071	23,304	7,605	269,736	197,395
1901	372,945	116,545	24,463	7,810	258,977	188,730
1902	373,999	118,695	24,350	8,072	264,038	197,217
1903	390,141	117,892	29,200	8,333	288,776	212,884
1904	407,398	120,871	37,226	8,652	299,038	222,182
1905	419,315	126,300	42,092	9,026	315,226	239,491
1906	440,917	137,009	43,080	9,371	328,127	248,722

TABLE No. 7—Continued.

ıent, by Counties, of Apportionment of State School Moneys for the School Year ending June 30, 1906. Apportioned July 2, 1906.

Counties.	Average Daily Attendance for year closing June 30, 1905.	Total Apportionment (on Attendance Basis).
da	19,575	$125,671 50
	42	269 64
ɔr	1,451	9,315 42
	2,840	18,232 80
ras	1,530	9,822 60
	1,207	7,748 94
Costa	2,915	18,714 30
rte	400	2,568 00
ado	1,151	7,389 42
	7,632	48,997 44
	826	5,302 92
oldt	4,576	29,377 92
	450	2,889 00
	2,502	16,062 84
	1,605	10,304 10
	815	5,232 30
	662	4,250 04
ngeles	37,044	237,822 48
a	921	5,912 82
	1,909	12,255 78
sa	519	3,331 98
cino	2,706	17,372 52
l	1,606	10,310 52
	812	5,213 04
	182	1,168 44
rey	2,840	18,232 80
	2,083	13,372 86
a	2,012	12,917 04
	4,027	25,853 34
	1,937	12,435 54
s	490	3,145 80
lde	3,255	20,897 10
ıento	5,848	37,544 16
ınito	926	5,944 92
ernardino	5,092	32,690 64
iego	4,656	29,891 52
ancisco	36,850	236,577 00
aquin	4,762	30,572 04
ıis Obispo	2,632	16,897 44
ateo	1,862	11,954 04
Barbara	2,966	19,041 72
Clara	8,660	55,597 20
Cruz	2,784	17,873 28
	2,269	14,566 98
	556	3,569 52
ɔu	2,106	13,520 52
	2,819	18,097 98
a	5,645	36,240 90
aus	1,998	12,827 16
	907	5,822 94
a	1,536	9,861 12
r	355	2,279 10
	3,800	24,396 00
nne	1,379	8,853 18
ra	2,087	13,398 54
	1,927	12,371 34
	929	5,964 18
ls	217,873	$1,398,744 66

ıl average daily attendance in primary and grammar schools for the ar closing June 30, 1905 217,873
e per child on average daily attendance $6 42
ount apportioned $1,398,744 66
ance unapportioned $1,099 33

APPORTIONMENT OF STATE SCHOOL FUND.

By an Act of the Legislature approved March 6, 1905, a new method of apportioning the State School Fund for the support of the primary and grammar schools became a law. This law went into effect September 1, 1905. The first apportionment under this law was made January 4, 1906. By the old law this money was apportioned among the counties of the State in proportion to the number of census children. Under the present law the census of each school district is divided by 70. For each 70 census children and for each fraction of 70 not less than 20 a teacher is allowed. A district is allowed a teacher for any fraction of 70, no matter how small that fraction. The number of teachers allowed to the several districts in a county is reported to the State Superintendent of Public Instruction by the County Superintendent of Schools at the time of reporting the census. In cities in which schools for the deaf have been established an additional teacher is allowed such cities for every 9 children in attendance in such deaf schools.

The total number of teachers allowed to the several counties under this law is 7,804. (See Table No. 8, Column A.)

TABLE No. 8.—In apportioning the State Fund on January 4, 1906, $250 was allowed the several counties for each teacher. This required $1,951,000. (See Column C.) The total average daily attendance in the primary and grammar schools as reported by the County Superintendents June 30, 1905, was 217,873. The rate per child was $3.41. (See Column D.)

In Column E of Table No. 8 will be found the apportionment of July 5, 1906, which completes the State apportionment for the year. The rate per child on average daily attendance (see Column B) is $6.42. The total apportionment for the year will be found in Column F. This is found by adding the January and the July apportionments.

TABLE No. 9.—This table is a comparison of the apportionment under the old law (apportioning on census basis) and that under the new law. Column A gives the census children in each county. Column B gives the January apportionment on census basis. Column C gives the July apportionment on the same basis. Column D is found by adding Columns B and C; this would be the total apportionment on census basis for the year. Column E is the total apportionment under present law. Column F shows the counties in the State with a decrease by the new method of apportionment and the amount of decrease per county. Column G shows the counties gaining on the apportionment under the new method, and the amount gained by each.

TABLE No. 10.—Columns A and B are the same as Columns F and G of Table No. 9. Column C shows the total number of teachers employed in the primary and grammar schools of each county on June 30, 1905. Column D shows the average amount of State School Fund received per teacher by each county. Column E shows the number of counties with a decrease in apportionment, and the amount of decrease per teacher employed on June 30, 1905. Column F shows the number of counties gaining, and the gain per teacher employed.

TABLE No. 8—APPORTIONMENT OF STATE SCHOOL FUND.

rison of the Apportionment of the State School Fund for the Fiscal Year ding June 30, 1906, under the Present Law, approved March 6, 1905, with the me Amount of Money Apportioned under the Old Law, apportioning the Money Census Basis.

unties.	A Number of Teachers Determined on Census of 1905.	B Average Daily Attendance for year closing June 30, 1905	C Apportionment on Teacher Basis. Jan. 4, 1906.	D Apportionment on Attendance Basis. Jan. 4, 1906.	E Apportionment on Attendance Basis. J .	F Total Apportionment. For Year.
da	533.00	19,575	$133,250 00	$66,750 75	$125,671 50	$325,672 25
	3.00	42	750 00	143 22	269 64	1,162 86
or	58.38	1,451	14,595 00	4,947 91	9,315 42	28,858 33
	115.67	2,840	28,917 50	9,684 40	18,232 80	56,834 70
ras	70.25	1,530	17,562 50	5,217 30	9,822 60	32,602 40
	50.05	1,207	12,512 50	4,115 87	7,748 94	24,377 31
Costa	98.00	2,915	24,500 00	9,940 15	18,714 30	53,154 45
orte	20.00	400	5,000 00	1,364 00	2,568 00	8,932 00
rado	66.17	1,151	16,542 50	3,924 91	7,389 42	27,856 83
	238.34	7,632	59,585 00	26,025 12	48,997 44	134,607 56
	38.52	826	9,630 00	2,816 66	5,302 92	17,749 58
oldt	164.00	4,576	41,000 00	15,604 16	29,377 92	85,982 08
	23.00	450	5,750 00	1,534 50	2,889 00	10,173 50
	104.00	2,502	26,000 00	8,531 82	16,062 84	50,594 66
	49.95	1,605	12,487 50	5,473 05	10,304 10	28,264 65
	46.34	815	11,585 00	2,779 15	5,232 30	19,596 45
	35.00	662	8,750 00	2,257 42	4,250 04	15,257 46
ngeles	1,030.35	37,044	257,587 50	126,320 04	237,822 48	621,730 02
a	43.18	921	10,795 00	3,140 61	5,912 82	19,848 43
	73.44	1,909	18,360 00	6,509 69	12,255 78	37,125 47
osa	32.19	519	8,047 50	1,769 79	3,331 98	13,149 27
cino	151.66	2,706	37,915 00	9,227 46	17,372 52	64,514 98
d	73.76	1,606	18,440 00	5,476 46	10,310 52	34,226 98
	41.00	812	10,250 00	2,768 92	5,213 04	18,231 96
	11.00	182	2,750 00	620 62	1,168 44	4,539 06
rey	126.74	2,840	31,685 00	9,684 40	18,232 80	59,602 20
	75.34	2,083	18,835 00	7,103 03	13,372 86	39,310 89
a	76.00	2,012	19,000 00	6,860 92	12,917 04	38,777 96
e	113.00	4,027	28,250 00	13,732 07	25,853 34	67,835 41
	80.43	1,937	20,107 50	6,605 17	12,435 54	39,148 21
as	28.00	490	7,000 00	1,670 90	3,145 80	11,816 70
ide	116.73	3,255	29,182 50	11,099 55	20,897 10	61,179 15
nento	178.01	5,848	44,502 50	19,941 68	37,544 16	101,988 34
enito	53.75	926	13,437 50	3,157 66	5,944 92	22,540 08
'nardino	154.48	5,092	38,620 00	17,363 72	32,690 64	88,674 36
iego	199.79	4,656	49,947 50	15,876 96	29,891 52	95,715 98
rancisco	1,406.00	36,850	351,500 00	125,658 50	236,577 00	713,735 50
oaquin	159.34	4,762	39,835 00	16,238 42	30,572 04	86,645 46
Obispo	123.00	2,632	30,750 00	8,975 12	16,897 44	56,622 56
lateo	66.09	1,862	16,522 50	6,349 42	11,954 04	34,825 96
Barbara	103.41	2,966	25,852 50	10,114 06	19,041 72	55,088 28
Clara	264.48	8,660	66,120 00	29,530 60	55,597 20	151,247 80
Cruz	107.94	2,784	26,985 00	9,493 44	17,873 28	54,351 72
	127.00	2,269	31,750 00	7,737 29	14,566 98	54,054 27
	24.00	556	6,000 00	1,895 96	3,569 52	11,465 48
ou	108.00	2,106	27,000 00	7,181 46	13,520 52	47,701 98
	103.68	2,819	25,920 00	9,612 79	18,097 98	53,630 77
na	217.90	5,645	54,475 00	19,249 45	36,240 90	109,965 35
laus	74.12	1,998	18,530 00	6,813 18	12,827 16	38,170 34
	40.00	907	10,000 00	3,092 87	5,822 94	18,915 81
na	78.79	1,536	19,697 50	5,237 76	9,861 12	34,796 38
y	25.00	355	6,250 00	1,210 55	2,279 10	9,739 65
	143.00	3,800	35,750 00	12,958 00	24,396 00	73,104 00
mne	54.00	1,379	13,500 00	4,702 39	8,853 18	27,055 57
ra	80.24	2,087	20,060 00	7,116 67	13,398 54	40,575 21
	72.29	1,927	18,072 50	6,571 07	12,371 34	37,014 91
	53.20	929	13,300 00	3,167 89	5,964 18	22,432 07
ls	7,804.00	217,873	$1,951,000 00	$742,946 93	$1,398,744 66	$4,092,691 59

TABLE No. 9—APPORTIONMENT OF STATE SCHOOL FUND.

Comparison of the Apportionment of State School Fund for the Fiscal Year closing June 30, 1906, under the Present Law, approved March 6, 1905, with the Same Amount of Money Apportioned under the Old Law, apportioning the Money on Census Basis.

Counties.	A Total No. Census Children June 30, 1905.	B Apportionment on Census Basis (Old Law). Jan. 4, 1906.	C Apportionment on Census Basis (Old Law). July 5, 1906.	D Total Apportionment on Census Basis (Old Law). For Year.	E Apportionment Under Present Law. For Year.	F Decrease by Counties, with Amount of Decrease.	G Counties Gaining Under New Law, and Amount of Gain.
Alameda	35,944	$230,760 48	$119,693 52	$350,454 00	$325,672 25	$24,781 75	
Alpine	59	378 78	196 47	575 25	1,162 86		$587 61
Amador	2,381	15,286 02	7,928 73	23,214 75	28,858 33		5,643 58
Butte	4,937	31,695 54	16,440 21	48,135 75	56,834 70		8,698 95
Calaveras	2,635	16,916 70	8,774 55	25,691 25	32,602 40		6,911 15
Colusa	1,857	11,924 94	6,183 81	18,108 75	24,377 31		6,268 56
Contra Costa	5,095	32,709 90	16,966 35	49,676 25	53,154 45		3,478 20
Del Norte	709	4,551 78	2,360 97	6,912 75	8,932 00		2,019 25
El Dorado	1,924	12,352 08	6,406 92	18,759 00	27,856 83		9,097 83
Fresno	12,314	79,055 88	41,005 62	120,061 50	134,607 56		14,546 06
Glenn	1,242	7,973 64	4,135 86	12,109 50	17,749 58		5,640 08
Humboldt	7,738	49,677 96	25,767 54	75,445 50	85,982 08		10,536 58
Inyo	907	5,822 94	3,020 31	8,843 25	10,173 50		1,330 25
Kern	4,356	27,965 52	14,505 48	42,471 00	50,594 66		8,123 66
Kings	2,777	17,456 34	9,247 41	26,703 75	28,264 65		1,560 90
Lake	1,473	9,456 66	4,905 09	14,361 75	19,596 45		5,234 70
Lassen	1,198	7,691 16	3,989 34	11,680 50	15,257 46		3,576 96
Los Angeles	67,875	435,757 50	226,023 75	661,781 25	621,730 02	40,051 23	
Madera	1,549	9,944 58	5,158 17	15,102 75	19,848 43		4,745 68
Marin	4,058	26,052 36	13,513 14	39,565 50	37,125 47	2,440 03	
Mariposa	872	5,598 24	2,903 76	8,502 00	13,149 27		4,647 27
Mendocino	5,214	33,473 88	17,362 62	50,836 50	64,514 98		13,678 48
Merced	2,644	16,974 48	8,804 52	25,779 00	34,226 98		8,447 98
Modoc	1,389	9,917 38	4,625 37	13,542 75	18,231 96		4,689 21
Mono	423	2,715 66	1,408 59	4,124 25	4,539 06		414 81

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Placer	3,141	20,165 22	10,459 53	30,624 75	39,148 21		8,523 46
Plumas	883	5,668 86	2,940 39	8,609 25	11,816 70		3,207 45
Riverside	5,590	35,887 80	18,614 70	54,502 50	61,179 15		6,676 65
Sacramento	2,664	62,042 88	32,181 12	94,224 00	101,988 34		7,764 34
San Benito	1,633	10,483 86	5,437 89	15,921 75	22,540 08		6,618 33
San Bernardino	9,070	58,229 40	30,203 10	88,432 50	88,674 36		241 86
San Diego	8,524	54,724 08	28,384 92	83,109 00	95,715 98		12,606 98
San Francisco	98,178	630,302 76	326,932 74	957,235 50	713,735 50	243,500 00	
San Joaquin	8,027	51,944 40	26,729 91	78,674 31	86,645 46		7,971 15
San Luis Obispo	4,820	30,944 40	16,050 60	46,995 00	56,622 56		9,627 56
San Mateo	3,559	22,848 78	11,851 47	34,700 25	34,825 96		125 71
Santa Barbara	5,175	33,223 50	17,232 75	50,456 25	55,008 28		4,552 03
Santa Clara	15,909	102,135 78	52,976 97	155,112 75	151,247 80	3,864 95	
Santa Cruz	5,598	35,939 16	18,641 34	54,580 50	54,351 72	228 78	
Shasta	3,925	25,198 50	13,070 25	38,268 75	54,054 27		15,785 52
Sierra	805	5,168 10	2,680 65	7,848 75	11,465 48		3,616 73
Siskiyou	3,786	24,306 12	12,607 38	36,913 50	47,701 98		10,788 48
Solano	5,170	33,191 40	17,216 10	50,407 50	53,630 77		3,223 27
Sonoma	10,553	67,750 26	35,141 49	102,891 75	109,965 35		7,073 60
Stanislaus	3,078	19,760 76	10,249 74	30,010 50	38,170 34		8,159 84
Sutter	1,332	8,551 44	4,435 56	12,987 00	18,915 81		5,928 81
Tehama	2,793	17,931 06	9,300 69	27,231 75	34,796 38		7,564 63
Trinity	725	4,654 50	2,414 25	7,068 75	9,739 65		2,670 90
Tulare	6,132	39,367 44	20,419 56	59,787 00	73,104 00		13,317 00
Tuolumne	2,300	14,766 00	7,659 00	22,425 00	27,055 57		4,630 57
Ventura	3,979	25,545 18	13,250 07	38,795 25	40,575 21		1,779 96
Yolo	3,076	19,747 92	10,243 08	29,991 00	37,014 91		7,023 91
Yuba	1,848	11,864 16	6,153 84	18,018 00	22,432 07		4,414 07
Totals	419,315	$2,692,002 30	$1,396,318 98	$4,088,321 28	$4,092,691 59	$314,866 74	$319,195 05

HIGH SCHOOL—LOS ANGELES.

HAIGHT SCHOOL GROUNDS—ALAMEDA CITY.

TABLE No. 11.

Statement, by years, showing the Amount of Receipts and Expenditures for Public Primary, Grammar, and High Schools of the State of California, from 1852 to 1906, inclusive.

Years.	Total Amount of State School Fund Apportioned.	Total Amount Raised by County and City Taxes.	Total Amount Raised from Miscellaneous Sources.	Amount Paid for Salaries of Teachers.	Amount Paid for Repairs, Fuel, and Contingent Expenses.	Amount Paid for Libraries.	Amount Paid for Apparatus.	Amount Paid for Sites, Buildings, and Furniture.	Total Expenditures.
1851				Not reported	Not reported.	Not reported.	Not reported.	Not reported.	Not reported.
1852			$2,417 00	$21,355 42	$2,000 00	Not reported	Not reported.	$4,748 32	$28,103 74
1853			10,626 00	30,215 00	10,525 00	Not reported.	Not reported.	13,491 01	54,231 01
1854	$52,061 00	$157,702 00	42,557 00	85,860 33	31,156 45	$3,990 52	Not reported.	151,822 52	272,829 82
1855	63,662 00	119,128 00	39,395 00	166,048 45	32,631 07	1,054 57	Not reported.	77,197 62	276,931 71
1856	69,961 00	121,639 00	28,619 00	200,941 00	49,668 84	2,127 16	Not reported.	52,484 00	305,221 00
1857	78,057 00	148,989 00	55,035 00	192,613 00	52,533 44	2,942 56	Not reported.	59,743 00	307,832 00
1858	53,405 00	162,870 00	85,107 00	203,276 37	45,395 92	3,042 78	Not reported.	88,199 70	339,914 77
1859	72,319 00	205,196 00	97,534 00	264,972 37	69,396 38	2,368 58	Not reported.	90,266 42	427,003 75
1860	81,118 00	230,514 00	122,858 00	311,165 38	50,989 41	1,756 09	Not reported.	110,352 86	474,263 74
1861	81,461 00	241,861 00	114,397 00	311,501 91	54,493 99	2,299 28	Not reported.	101,818 38	470,113 56
1862	75,412 00	294,828 00	141,806 00	330,249 02	59,479 76	2,225 57	Not reported.	49,274 62	441,228 97
1863	145,537 00	328,554 00	68,209 00	328,338 02	58,271 97	594 75	$2,271 22	93,931 53	483,407 49
1864	132,217 00	260,842 00	84,084 00	411,101 01	69,562 36	1,132 21	6,010 84	167,393 44	655,199 86
1965	168,828 00	390,306 00	91,181 00	526,585 14	89,056 57	5,792 01	3,777 86	257,804 98	883,016 56
1866	132,410 00	470,668 00	79,600 00	551,462 02	116,577 47	2,074 81	4,059 47	185,056 42	859,230 19
1867	268,910 00	595,718 00	81,066 00	696,110 28	206,412 25	10,125 01	5,431 83	238,070 64	1,156,150 01
1868	252,603 00	654,738 00	73,986 00	763,639 15	143,518 56	19,069 56	4,061 72	221,118 43	1,151,407 42
1869	290,796 00	847,229 00	66,531 00	873,814 07	185,672 91	20,415 76	4,915 83	205,766 95	1,290,585 52
1870	360,447 00	839,756 00	63,441 00	976,937 75	179,070 23	29,984 22	3,692 27	339,362 37	1,529,046 84
1871	423,853 00	923,809 00	46,660 00	1,103,125 14	289,691 57	26,766 30	3,689 46	390,158 50	1,713,430 97
1872	424,022 00	1,249,943 00	232,075 00	1,282,799 15	277,900 99	25,793 54	4,720 13	290,119 01	1,881,332 82
1873	430,220 00	1,541,597 00	310,502 00	1,434,366 93	275,674 70	24,879 48	4,365 70	374,089 44	2,113,356 25
1874	428,414 12	1,332,208 82	345,316 95	1,560,830 16	331,952 80	21,752 82	4,152 80	192,467 25	2,111,155 93

1875	1,212,252 03	1,115,530 06	676,259 64	1,810,479 62	381,806 62	33,962 72	10,713 02	421,279 35	2,608,241 34
1876	1,317,603 84	1,240,637 31	158,206 40	1,983,939 96	374,222 49	48,757 50	10,974 66	440,706 37	2,858,600 98
1877	1,474,600 26	1,486,233 73	137,100 31	2,149,435 70	378,754 50	55,148 64	18,984 19	147,426 43	2,749,729 46
1878	1,579,195 52	1,393,014 96	106,396 84	2,272,551 19	426,707 66	53,947 85	12,513 65	390,094 92	3,155,815 27
1879	1,423,941 75	1,446,852 04	92,852 41	2,285,732 39	371,992 13	46,490 50	13,565 73	293,126 38	3,010,907 13
1880	1,506,171 84	1,393,572 44	104,824 80	2,207,043 85	400,867 61	44,546 39	21,842 63	190,270 94	2,864,571 42
1881	1,790,457 62	1,343,306 02	32,048 79	2,346,056 58	401,572 56	79,432 10	15,694 04	204,849 66	3,047,604 94
1882	1,882,121 67	1,260,843 64	23,046 88	2,406,780 68	411,117 17	63,060 32	20,618 98	221,089 05	3,122,666 20
1883	1,890,724 20	1,315,818 96	32,462 71	2,511,078 40	419,760 85	61,032 26	26,504 11	293,839 66	3,312,215 28
1884	1,894,191 00	1,411,543 56	27,715 40	2,573,623 54	415,587 39	59,642 08	23,204 69	292,165 85	3,364,223 55
1885	1,831,171 44	1,694,959 45	53,140 83	2,583,403 46	433,972 56	64,056 08	16,787 03	466,811 74	3,565,030 87
1886	1,890,733 32	1,690,704 86	138,596 48	2,710,621 82	422,843 30	64,627 32	24,833 01	283,006 18	3,505,931 63
1887	2,027,789 40	1,793,809 95	51,250 25	2,912,859 30	480,455 63	64,189 18	23,679 10	408,704 96	3,889,888 17
1888	2,168,686 08	2,170,058 19	259,554 55	3,083,027 24	527,035 55	58,229 04	31,534 85	621,554 82	4,321,381 50
1889	2,531,880 00	2,442,254 64	337,006 91	3,343,191 80	624,810 95	59,522 72	33,791 82	935,548 42	4,996,865 71
1890	2,635,716 10	2,293,335 75	98,092 22	3,594,588 98	706,995 12	71,121 94	42,442 85	703,947 79	5,119,096 68
1891	2,662,200 08	2,249,975 72	134,192 19	3,713,544 37	732,148 98	72,714 87	45,352 20	548,740 11	5,112,500 53
1892	2,354,786 00	2,464,706 04	266,455 77	3,874,346 88	750,929 32	72,961 08	45,424 77	608,229 27	5,351,891 32
1893	3,403,072 72	2,404,898 76	774,090 08	4,055,888 51	806,717 80	76,677 51	46,837 62	723,565 66	5,709,687 10
1894	2,770,661 84	2,388,359 31	337,815 12	4,005,721 80	752,757 68	61,890 04	30,130 55	574,293 10	5,424,793 17
1895	2,829,005 74	2,472,540 41	508,203 22	4,081,340 44	793,834 91	63,601 20	46,915 95	698,215 59	5,683,908 09
1896	3,043,884 60	2,517,827 78	256,021 31	4,291,481 12	899,861 54	71,249 23	35,492 78	503,674 80	5,801,759 47
1897	2,943,310 10	2,677,945 07	156,638 37	4,418,544 67	899,726 74	68,719 53	18,885 63	441,871 03	5,847,747 60
1898	3,106,072 72	2,684,416 96	364,030 62	4,582,625 71	1,010,710 13	72,975 97	16,693 40	494,899 39	6,177,904 60
1899	3,076,472 40	2,690,705 16	172,053 24	4,562,994 54	1,025,473 62	*88,341 06		397,793 15	6,074,601 37
1900	3,567,763 56	2,861,409 16	296,345 64	4,850,804 22	994,727 41	*81,749 79		268,157 32	6,195,438 74
1901	3,485,126 45	2,888,046 10	93,171 60	4,685,144 20	1,080,040 37	*82,995 12		525,050 16	6,373,229 85
1902	3,584,001 45	3,076,699 73	99,687 86	4,748,472 75	1,329,359 68	*88,923 05		439,305 94	6,606,061 42
1903	3,590,390 40	3,887,778 68	699,758 22	5,665,431 02	1,461,838 79	*105,016 92		937,879 47	8,170,166 20
1904	3,926,972 18	4,644,967 95	1,299,565 92	6,027,850 53	1,500,815 22	*138,439 04		1,734,359 36	9,401,464 15
1905	4,234,241 02	4,580,258 78	1,961,805 35	6,460,879 67	1,675,564 94	*133,457 82		1,408,100 86	9,678,003 29
1906	3,880,740 82	3,681,439 68	1,603,236 84	7,003,176 86	1,805,867 52	*148,351 94		1,983,163 70	10,940,560 02

*Includes cost of apparatus.

TABLE No. 12.

Statistical Summary, by years, of the Kindergarten, Primary and Grammar, and High Schools of California, from 1851 to 1906, inclusive.

Years.	Number of Children Listed by Census Marshals.	Number of Children Under Five Years of Age.	Number of Census Children in Private Schools.	Number of Teachers.	Number of Children Enrolled on School Register.	Average Daily Attendance.
1851	5,906				1,846	
1852	17,821				3,314	
1853	19,442				4,193	2,02[illegible]
1854	20,075			214	9,746	4,63[illegible]
1855	26,077			301		6,44[illegible]
1856	30,039			392		8,49[illegible]
1857	35,722			486	17,232	9,717
1858	40,530	23,558		517	19,822	11,183
1859	48,676	28,300		744	23,519	13,364
1860	57,917	30,932	5,438	831	26,993	14,750
1861	68,395	35,334	6,306	932	31,786	17,804
1862	71,821	38,127	6,886	962	36,566	19,262
1863	78,055	39,081	9,158	919	36,540	19,992
1864	86,031	41,323	11,359	1,079	47,588	24,794
1865	95,067	42,733	12,478	1,155	50,089	29,592
1866	84,179	52,037	15,671	1,268	50,273	
1867	94,213	52,975	14,026	1,389	62,227	
1868	104,118	58,119	14,820	1,590	65,828	43,681
1869	112,743	57,983	16,273	1,687	73,754	49,802
1870	121,751	62,940	16,198	1,869	85,808	54,271
1871	130,116	66,292	15,524	2,052	91,332	64,286
1872	137,351	69,723	13,787	2,301	94,720	65,700
1873	141,610	70,086	12,507	2,336	107,593	69,461
1874	159,717	73,876	14,149	2,452	120,240	72,283
1875	171,563	78,650	15,021	2,693	130,930	78,027
1876	184,787	83,595	14,625	2,894	140,468	83,391
1877	200,067	88,951	15,344	3,077	147,863	89,539
1878	205,475	85,061	15,310	3,393	154,064	94,696
1879	216,404	86,633	15,432	3,453	156,769	98,468
1880	215,978	87,635	14,953	3,595	158,765	100,966
1881	211,237	88,068	13,898	3,737	163,855	105,541
1882	216,330	86,490	14,572	3,777	168,024	107,177
1883	222,846	86,709	15,957	3,930	174,611	112,594
1884	235,672	87,643	17,953	4,083	179,801	124,814
1885	250,097	89,758	19,519	4,242	184,001	116,028
1886	259,973	92,507	18,919	4,444	189,220	125,718
1887	272,448	89,940	22,661	4,888	196,907	129,297
1888	270,500	98,203	20,768	4,938	207,050	132,277
1889	275,302	104,174	21,044	5,255	215,905	143,733
1890	280,882	106,302	21,460	5,434	221,756	146,589
1891	285,775	110,270	22,587	5,659	229,986	153,599
1892	294,033	112,423	20,886	5,891	238,106	158,875
1893	302,474	115,886	22,164	6,136	232,501	157,673
1894	313,637	119,201	21,779	6,257	235,837	164,664
1895	323,130	122,637	20,502	6,589	241,322	170,861
1896	330,709	124,113	21,405	6,885	249,335	176,083
1897	340,952	123,994	20,770	7,190	247,061	180,209
1898	347,624	120,939	20,620	7,432	259,459	185,424
1899	350,124	118,642	22,957	7,366	265,364	195,540
1900	361,157	116,071	23,304	7,605	269,736	197,395
1901	372,945	116,545	24,463	7,810	258,977	188,730
1902	373,999	118,695	24,350	8,072	264,038	197,217
1903	390,141	117,892	29,200	8,333	288,776	212,884
1904	407,398	120,871	37,226	8,652	299,038	222,182
1905	419,315	126,300	42,092	9,026	315,226	239,491
1906	440,917	137,009	43,080	9,371	328,127	248,722

TABLE No. 13.

Number of Pupils Graduating from Grammar and High Schools.

Counties.	From Grammar Schools.						From High Schools.					
	Boys.		Girls.		Total.		Boys.		Girls.		Total.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.		1906.	1905.	1906.
Alameda	447	573	587	744	1,034	1,317	131	134	206	209	337	343
Alpine												
Amador	35	34	52	43	87	77	3	3	4	5	7	8
Butte	27	44	52	56	79	100	9	19	15	28	24	47
Calaveras	13	9	23	9	36	18						
Colusa	32	62	53	70	85	132	6	4	9	12	15	16
Contra Costa	85	66	66	90	151	156	6	18	9	24	15	42
Del Norte	5	9	11	21	16	30		1	3	2	3	3
El Dorado	22	43	38	41	60	84						
Fresno	139	191	201	246	340	437	21	32	57	58	78	90
Glenn	13	24	11	37	24	61	6	4	10	5	16	9
Humboldt	59	72	100	110	159	182	9	17	23	24	32	41
Inyo	14	26	31	19	45	45	2		4	1	6	1
Kern	55	41	50	50	105	91	6	9	21	22	27	30
Kings	38	70	47	89	85	159	8	17	22	16	30	33
Lake	26	20	43	32	69	52	3	2	13	8	16	10
Lassen	13	12	16	13	29	25						
Los Angeles	828	1,105	1,153	1,352	1,981	2,457	155	177	227	281	382	458
Madera	9	16	18	32	27	48	2	3	3	12	5	15
Marin	43	32	47	45	90	77	4	5	10	19	14	24
Mariposa	7	7	13	15	20	22						
Mendocino	81	103	104	123	185	226	14	15	18	8	32	23
Merced	60	47	72	56	132	103	11	7	20	17	31	24
Modoc	20	16	32	28	52	44				3		3
Mono	7	5	12	7	19	12						
Monterey	25	31	40	76	65	107	11	12	24	19	35	31
Napa	72	53	74	84	146	137	10	6	8	10	18	16
Nevada	6	4	17	16	23	20	12	8	10	18	22	26
Orange	80	65	91	115	171	180	32	35	62	49	94	84
Placer	77	50	72	64	149	114	4	9	7	9	11	18
Plumas	15	10	25	20	40	30						
Riverside	111	108	115	117	226	225	29	32	23	41	52	73
Sacramento	103	94	145	218	248	312	18	19	29	39	47	58
San Benito	40	25	50	35	90	60	9	10	9	14	18	24
S. Bernard'o	104	140	121	141	225	281	39	43	48	52	87	95
San Diego	158	153	141	194	299	347	32	31	30	33	62	64
San Fran'co	635	710	671	1,197	1,306	1,907	163	154	227	249	390	403
San Joaquin	89	103	120	120	209	223	21	18	32	34	53	52
S. L. Obispo	18	23	30	31	48	54	13	13	19	12	32	25
San Mateo	60	41	84	42	144	83	4	3	16	16	20	19
S. Barbara	45	51	43	92	88	143	13	13	28	28	41	41
Santa Clara	145	289	201	376	346	665	69	71	103	95	172	166
Santa Cruz	99	175	98	181	197	356	22	22	42	35	64	57
Shasta	59	105	95	82	154	187	13	1	17	5	30	6
Sierra	3	10	16	14	19	24						
Siskiyou	26	24	28	56	54	80	2	4	5	9	7	13
Solano	61	53	69	91	130	144	21	13	27	32	48	45
Sonoma	75	61	87	112	162	173	21	24	45	49	66	73
Stanislaus	33	43	49	55	82	98	6	6	8	9	14	15
Sutter	20	34	29	38	49	72	2	4	3	6	5	10
Tehama	19	30	35	50	54	80	10	5	6	18	16	23
Trinity	3	4	3	3	6	7						
Tulare	104	96	140	143	244	239	16	25	42	37	58	62
Tuolumne	26	34	40	25	66	59		1		10		11
Ventura	72	68	82	74	154	142	5	11	27	28	32	39
Yolo	23	31	30	55	53	86	12	10	10	12	22	22
Yuba	23	9	30	15	53	24	3	8	3	6	6	14
Totals	4,507	5,345	5,703	7,260	10,210	12,614	1,007	1,078	1,584	1,735	2,591	2,813

TABLE No. 14.

Average Cost per Pupil per Annum.

(Estimate based on cost of teachers' salaries and current expense.)

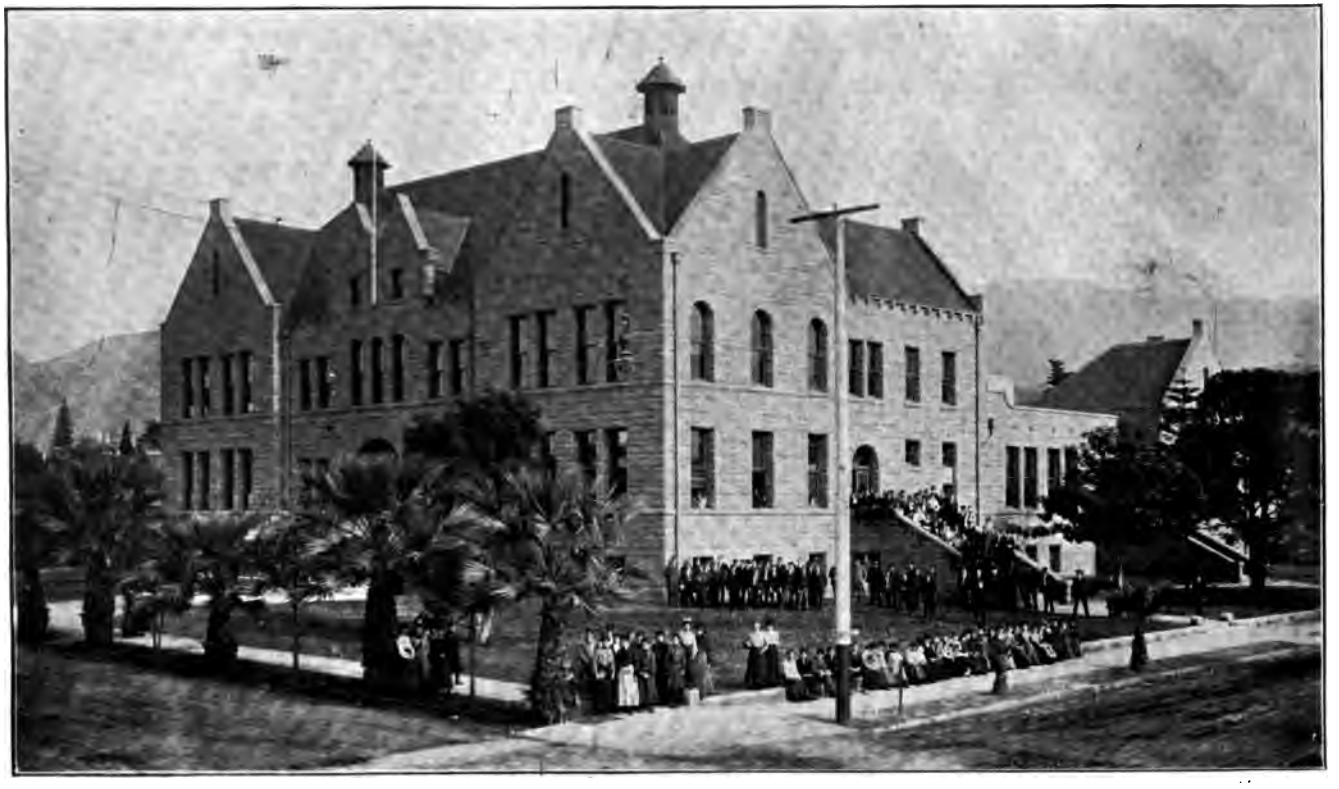
Counties.	Primary and Grammar Schools.		High Schools.	
	1905.	1906.	1905.	1906.
Alameda	$25 27	$24 29	$46 26	$45 0
Alpine	31 83	36 00		
Amador	20 56	22 33	45 42	44 8
Butte	23 72	23 47	63 12	69 8
Calaveras	20 53	23 59		61 50
Colusa	27 25	29 95	78 84	90 33
Contra Costa	22 10	22 46	93 30	94 07
Del Norte	24 88	28 80	92 23	63 50
El Dorado	24 38	25 90		56 56
Fresno	22 86	24 58	66 66	69 94
Glenn	35 60	39 62	98 99	134 85
Humboldt	22 63	22 80	64 60	51 50
Inyo	25 10	26 13	68 71	53 70
Kern	26 42	27 90	63 05	66 30
Kings	19 39	28 28	66 17	63 44
Lake	23 03	24 39	48 13	57 45
Lassen	25 85	28 85	87 75	93 88
Los Angeles	22 99	22 74	67 08	62 11
Madera	30 30	32 00	104 58	92 65
Marin	26 25	23 61	59 56	65 76
Mariposa	26 85	39 15		
Mendocino	19 58	24 30	84 57	110 48
Merced	28 83	27 89	109 75	93 31
Modoc	31 81	24 23	80 91	75 20
Mono	37 61	35 72		
Monterey	25 00	25 70	65 00	62 33
Napa	22 40	22 39	77 74	76 65
Nevada	22 24	22 01	66 46	71 50
Orange	26 68	23 84	60 94	78 54
Placer	24 07	25 63	66 74	56 62
Plumas	37 19	37 57		
Riverside	25 88	25 55	52 50	50 75
Sacramento	27 08	27 13	49 20	53 57
San Benito	28 62	33 75	42 85	61 50
San Bernardino	24 45	24 99	75 06	75 20
San Diego	25 05	28 89	57 48	60 63
San Francisco	22 85	26 41	47 12	35 58
San Joaquin	28 57	25 85	66 17	58 02
San Luis Obispo	28 70	21 30	62 97	68 18
San Mateo	23 86	29 60	99 93	87 18
Santa Barbara	25 00	26 93	86 67	107 77
Santa Clara	24 62	25 47	42 22	48 83
Santa Cruz	26 75	23 05	47 80	53 75
Shasta	19 20	21 11	64 90	79 84
Sierra	24 37	26 05		
Siskiyou	22 67	24 80	120 70	98 90
Solano	25 87	26 82	73 21	78 30
Sonoma	20 70	22 17	46 27	50 83
Stanislaus	26 04	25 76	88 81	81 14
Sutter	25 03	27 25	94 21	92 96
Tehama	20 50	26 27	80 18	78 64
Trinity	27 00	28 00		
Tulare	23 38	28 82	52 42	59 98
Tuolumne	22 00	22 97	98 00	100 40
Ventura	25 66	26 10	80 81	89 88
Yolo	23 75	24 36	87 87	81 56
Yuba	27 59	29 14	52 68	54 30
Averages	$27 34	$26 75	$77 70	$71 95

TABLE No. 15.

er of Grades or Years in Course of Study for Primary and Grammar Schools.

Counties.	Number of Grades or Years in		Number of Years Optional.	Total Number of Grades in Course of Study.	Years or Grades in which Examinations are held for Graduation from Grammar Schools.
	Primary Course.	Grammar Course.			
da	5	3		8	7, 8
		9		9	9
or	7	2		9	9
	6	3		9	9
ras	5	4		9	9
	5	3		8	8
Costa	4	4		8	8
rte	4	4		8	8
rado	6	3		9	9
	4	5		9	9
	6	3		9	9
oldt	5	3	1	9	8
	5	3		8	7, 8
	4	4		8	5, 6, 7, 8
	5	3		8	No exam'n*
		9		9	9
	5	3		8	8
geles	4	4		8	7, 8†
		8		8	6, 7, 8
	4	4		8	7, 8
sa	4	5		9	9
cino	4	4		8	8
	5	4		9	8, 9
	6	3		9	9
	5	4		9	6, 7, 8, 9
rey	5	4		9	8, 9,
	5	4		9	7, 8, 9
	5	4		9	8, 9
	5	3		8	6, 7, 8
	5	4		9	9
	5	4		9	8, 9
ide	5	3		8	8
ento	5	4		9	9
nito	6	3		9	7, 8, 9
rnardino	4	4		8	7, 8
ego	5	3		8	8
ancisco	4	4		8	No exam'n
aquin	5	4		9	9
is Obispo	4	4		8	8
ateo	5	3		8	4, 5, 6, 7, 8
Barbara	6	2		8	9
Clara	4	4		8	7, 8
Cruz	4	4		8	5, 6, 7, 8
	5	3		8	8
	6	4		10	9
ou	4	4		8	8
	4	4		8	8
a	5	3		8	7, 8
aus	5	3		8	5, 6, 7, 8
	5	4		9	9
a	6	3		9	8, 9
	6	3	1	10	9
	5	4		9	9
nne	3	5		8	8
a	4	4		8	6, 7, 8
	5	4		9	9
	6	3	1	9	9

omas granted on recommendation of Teacher and Superintendent.
and 6th years for supervision only.



HIGH SCHOOLS.

HIGH SCHOOL—LOS ANGELES.

THE LOS ANGELES HIGH SCHOOL.

By W. H. HOUSH, Principal.

This High School is one of the oldest in the State. It was founded 1873 and graduated its first class in 1875. It has participated in rapid growth of the city, and for the last twelve years has suffered m overcrowding. Enthusiasm attends growth, and the school has ot in the front rank of California's best high schools, with a pro- ssive course of study, modern methods of teaching, good science and ary equipment, facilities for physical training, and last, but not st, the means of supplying the pupils with a warm and wholesome ch. The course of study attempts to lay equal stress upon each partment, the aim of the school being to secure general culture and lay a broad foundation for professional, scientific, or business train- . The school is departmental, the head of each department being an or woman especially well qualified for the position.

The methods of presentation are kept up to date by an excellent ps of teachers, which is annually recruited from the best available terial. The science laboratories, while well equipped, are entirely dequate, and the Board of Education has just awarded a contract the construction of a new $90,000 science building. A special ture of this building will be the wing devoted to art. The art partment has just been enlarged to include, in addition to freehand l mechanical drawing, courses in pen and ink, water-color, clay- leling, and wood-carving.

The school was one of the first to employ a trained librarian. The ng lady placed in charge is a graduate of the High School and has l five years' experience in the public library. The use of the refer- e books has been systematized, the value of the library enhanced ny fold, and time and nerve wear saved to the pupils.

The completion of a $4,000 gymnasium the past year and placing a l-trained teacher of physical training in charge have rewarded the rts of the pupils, who raised one half of the money required for the lding. Good results are already apparent.

Space does not permit more than a mention of the musical, literary, athletic societies, and of the battalion of cadets, organized and ipped by the pupils themselves.

The feature of the school most recently added, and probably most resting to the general public, is the lunch-room. In answer to eated requests for the service of a warm lunch the Board of Educa- offered to put up a cheap but suitable building if the student body ld assume all responsibility of management. The offer was accepted the Board built a one-story structure, 60 by 30 feet, floored but ceiled, and provided an initial outfit including range, cooking els, dishes, tables and seats, at a cost, approximately, of $1,000. cooking and serving of lunch and the financial management were

undertaken by the pupils. They engaged a first-class cook, two assistants, and a dish-washer. Pupils volunteered as waiters, receiving for compensation their own lunches free. Very few waiters are needed, as the service is caféteria style. Each pupil takes a tray with knife, fork and spoon, enters an inclosure where the prepared dishes are placed upon a counter, selects what he wishes to eat, pays at the other end of the inclosure, and takes his lunch to a table.

Each day's menu is posted in a conspicuous place, with the price of each dish given. Before entering the dining-room the pupils buy tickets of denominations to suit the dishes desired. The tickets at present used are five-, three-, and two-cent.

Provisions of the best quality are bought at wholesale prices, and the dishes are sold at a very little above cost, the aim being to get a wholesome lunch at the lowest price. A few details may be helpful to those who contemplate providing a warm school lunch. From a great variety of dishes a pupil gets, for instance, one of the following for five cents: Meat (roast or stew), a sandwich, chocolate, salad, or dessert; for three or two cents, mashed potatoes, a vegetable, a cooky or an orange; for one cent, a piece of bread or a slice of butter. The average price paid by the pupils for lunch is from ten to twelve cents.

Being inexperienced, the management at first ran behind, but during the latter part of the year the monthly receipts and expenditures were approximately as follows:

Receipts from tables, windows, and ice-cream stands	$700
Expense of cook, assistants, provisions, etc.	$650

leaving a net gain to the school of about $50 a month.

After paying all indebtedness, the student body turn all the profits into the treasury of the school, to be used in the support of school activities.

Since the enrollment is 1,500 the service is not adequate, and provision will be made to serve a much larger number of students the coming year.

The keynote of the school is student management of all school activities and enterprises. The assumption by student committees of responsibility usually devolving upon the school authorities has relieved much of the tension formerly existing between pupils and teachers. The transfer of responsibility has been slow and gradual, being made only when there has been a practically unanimous desire on the part of the pupils and of the Faculty for coöperation.

In the hands of the student body is placed the management of all school activities, and the discipline outside the class-rooms. Two self-government committees, one of fifteen boys and the other of an equal number of girls, elected by the several grades, have charge of the conduct of the pupils on the school grounds, in the halls, and on the streets, everywhere except in the class and recitation rooms. These committees choose their own officers, appoint sub-committees, deal out punishment fearlessly and impartially, and are more dreaded by wrongdoers than the teachers themselves. No teachers serve on these committees, even in an advisory capacity. The constitution and by-laws are submitted for approval to the Principal, who is the court of appeal, and, if necessary, the executive officer.

POLYTECHNIC HIGH SCHOOL—LOS ANGELES.

A board of directors of fifteen—twelve pupils and three teachers has control of school activities, and administers the financial affairs of the school. The board appoints all managers of the athletic teams, apportions the school moneys equitably among the several teams, and exacts a strict accounting. Including the receipts from annual dues and gate receipts for athletic and debating contests, musical entertainments, and lunch-room management, the amount handled by this committee exceeds $8,000 a year. All bills are audited and paid by the board, all of whose officers, except the treasurer, are pupils. In almost every instance the boys and girls have taken their duties seriously. The result is a practical training in business methods and citizenship. Placing responsibility in the hands of the pupils has developed the qualities of self-confidence, manliness, self-control, administrative ability, and fidelity to trusts assumed or imposed.

APPORTIONMENT OF STATE HIGH SCHOOL FUND.

Having received from the State Controller the following communications relating to the amount of money in the hands of the State Treasurer available for the support of High Schools that meet the requirements of an Act of the Legislature approved March 2, 1903, entitled "An Act creating a fund for the benefit and support of High Schools, and providing for its distribution":

CONTROLLER'S DEPARTMENT, STATE OF CALIFORNIA,
SACRAMENTO, December 30, 1905.

HON. THOMAS J. KIRK,
Supt. Public Instruction,
State Capitol, Sacramento, Cal.:

DEAR SIR: In pursuance of law I beg to inform you that at this date there is on hand to the credit of the "State High School Fund," and subject to the semi-annual apportionment, the sum of one hundred sixty-eight thousand nine hundred ninety-seven and 36-100 ($168,997.36) dollars.

Very truly yours,
E. P. COLGAN, Controller.
By D. A. MOULTON, Deputy.

CONTROLLER'S DEPARTMENT, STATE OF CALIFORNIA,
SACRAMENTO, July 2, 1906.

HON. THOMAS J. KIRK,
Supt. Public Instruction,
State Capitol, Sacramento, Cal.:

DEAR SIR: Pursuant to law, I beg to inform you that at this time there is on hand to the credit of the State High School Fund, and subject to the semi-annual apportionment, the sum of seventy-four thousand twenty-three and 37-100 ($74,023.37) dollars.

Respectfully submitted,
E. P. COLGAN, Controller.
By D. A. MOULTON, Deputy.

I have, in pursuance of the terms and conditions of said Act, apportioned said money to High Schools in different counties of the State, as follows:

TABLE No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND.

County, and Name of School.	Average Daily Attendance.	January 2, 1906.			July 3, 1906.		
		Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.	Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.
Alameda.							
Alameda	349	$356 53	$2,080 04	$2,436 57	$156 15	$910 89	$1,067 04
Berkeley	627	356 53	3,736 92	4,093 45	156 15	1,636 47	1,792 62
Oakland	839	356 53	5,000 44	5,356 97	156 15	2,189 79	2,345 94
Oakland Polytechnic	281	356 53	1,674 76	2,031 29	156 15	733 41	889 56
Union No. 1	59	356 53	351 64	708 17	156 15	153 99	310 14
Union No. 2	61	356 53	363 56	720 09	156 15	159 21	315 36
Union No. 3	53	356 53	315 88	672 41	156 15	138 33	294 48
Total	2,269			$16,018,95			$7,015 14
Amador.							
Ione	49	$356 53	$292 04	$648 57	$156 15	$127 89	$284 04
Total	49			$648 57			$284 04

TABLE No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County and Name of School.	Average Daily Attendance.	January 2, 1906.			July 3, 1906.		
		Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.	Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.
Butte.							
Chico	122	$356 53	$727 12	$1,083 65	$156 15	$318 42	$474 57
Gridley	21	356 53	125 16	481 69	156 15	54 81	210 96
Oroville	54	356 53	321 84	678 37	156 15	140 94	297 09
Total	197			$2,243 71			$982 62
Colusa.							
Colusa	64	$356 53	$381 44	$737 97	$156 15	$167 04	$323 19
Pierce, Jt. Union	24	356 53	143 04	499 57	156 15	62 64	218 79
Total	88			$1,237 54			$541 98
Contra Costa.							
Albambra	31	$356 53	$184 76	$541 29	$156 15	$80 91	$237 06
John Swett	35	356 53	208 60	565 13	156 15	91 35	247 50
Liberty	27	356 53	160 92	517 45	156 15	70 47	226 62
Mount Diablo	55	356 53	327 80	684 33	156 15	143 55	299 70
Riverview	28	356 53	166 88	523 41	156 15	73 08	229 23
Total	176			$2,831 61			$1,240 11
Del Norte.							
Del Norte County	27	$356 53	$160 92	$517 45	$156 15	$70 47	$226 62
Total	27			$517 45			$226 62
Fresno.							
Clovis	38	$356 53	$226 48	$583 01	$156 15	$99 18	$255 33
Fowler	43	356 53	256 28	612 81	156 15	112 23	268 38
Fresno	309	356 53	1,841 64	2,198 17	156 15	806 49	962 64
Reedley, Jt. Union	30	356 53	178 80	535 33	156 15	78 30	234 45
Sanger	43	356 53	256 28	612 81	156 15	112 23	268 38
Selma	97	356 53	578 12	934 65	156 15	253 17	409 32
Washington	51	356 53	303 96	660 49	156 15	133 11	289 26
Total	611			$6,137 27			$2,687 76
Glenn.							
Glenn County	36	$356 53	$214 56	$571 09	$156 15	$93 96	$250 11
Orland, Jt. Union	23	356 53	137 08	493 61	156 15	60 03	216 18
Total	59			$1,064 70			$466 29
Humboldt.							
Arcata	37	$356 53	$220 52	$577 05	$156 15	$96 57	$252 72
Eureka	183	356 53	1,090 68	1,447 21	156 15	477 63	633 78
Ferndale	21	356 53	125 16	481 69	156 15	54 81	210 96
Fortuna	26	356 53	154 96	511 49	156 15	67 86	224 01
Total	267			$3,017 44			$1,321 47
Inyo.							
Bishop	21	$356 53	$125 16	$481 69	$156 15	$54 81	$210 96
Total	21			$481 69			$210 96
Kern.							
Kern County	164	$356 53	$977 44	$1,333 97	$156 15	$428 04	$584 19
Total	164			$1,333 97			$584 19
Kings.							
Hanford	129	$356 53	$768 84	$1,125 37	$156 15	$336 69	$492 84
Lemoore, Jt. Union	26	356 53	154 96	511 49	156 15	67 86	224 01
Total	155			$1,636 86			$716 85

TABLE No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	January 2, 1906.			July 3, 1906.		
		Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.	Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.
Lake.							
Clear Lake	75	$356 53	$447 00	$803 53	$156 15	$195 75	$351 90
Total	75			$803 53			$351 90
Lassen.							
Lassen County	46	$356 53	$274 16	$630 69	$156 15	$120 06	$276 21
Total	46			$630 69			$276 21
Los Angeles.							
Alhambra	58	$356 53	$345 68	$702 21	$156 15	$151 38	$307 53
Bonita	33	356 53	196 68	553 21	156 15	86 13	242 28
Citrus	68	356 53	405 28	761 81	156 15	177 48	333 63
Compton	92	356 53	548 32	904 85	156 15	240 12	396 27
Covina	62	356 53	369 52	726 05	156 15	161 82	317 97
El Monte	23	356 53	137 08	493 61	156 15	60 03	216 18
Excelsior	37	356 53	220 52	577 05	156 15	96 57	252 72
Glendale	50	356 53	298 00	654 53	156 15	130 50	286 65
Hollywood	80	356 53	476 80	833 33	156 15	208 80	364 95
Jewell†	18	356 53	107 28	463 81	156 15	46 98	203 13
Long Beach	201	356 53	1,197 96	1,554 49	156 15	524 61	680 76
Los Angeles	1366	356 53	8,141 36	8,497 89	156 15	3,565 26	3,721 41
Los Angeles (Com'l)	472	356 53	2,813 12	3,169 65	156 15	1,231 92	1,388 07
Los Nietos Valley	57	356 53	339 72	696 25	156 15	148 77	304 92
Monrovia	90	356 53	536 40	892 93	156 15	234 90	391 05
Pasadena	443	356 53	2,640 28	2,996 81	156 15	1,156 23	1,312 38
Pomona	156	356 53	929 76	1,286 29	156 15	407 16	563 31
San Fernando	32	356 53	190 72	547 25	156 15	83 52	239 67
San Pedro*	17						
Santa Monica	85	356 53	506 60	863 13	156 15	221 85	378 00
South Pasadena	5						
Whittier	131	356 53	780 76	1,137 29	156 15	341 91	498 06
Wilmington*	11						
Total	3554			$28,312 44			$12,398 94
Madera.							
Madera	66	$356 53	$393 36	$749 89	$156 15	$172 26	$328 41
Total	66			$749 89			$328 41
Marin.							
San Rafael	98	$356 53	$584 08	$940 61	$156 15	$255 78	$411 93
Total	98			$940 61			$411 93
Mendocino.							
Fort Bragg	53	$356 53	$315 88	$672 41	$156 15	$138 33	$294 48
Mendocino	44	356 53	262 24	618 77	156 15	114 84	279 99
Point Arena†	13	356 53	77 48	434 01	156 15	33 93	190 08
Round Valley*	13						
Ukiah	84	356 53	500 64	857 17	156 15	219 24	375 39
Willits†	17	356 53	101 32	457 85	156 15	44 37	200 52
Total	211			$3,040 21			$1,331 46
Merced.							
Merced County	106	$356 53	$631 76	$988 29	$156 15	$276 66	$432 81
West Side	31	356 53	184 76	541 29	156 15	80 91	237 06
Total	137			$1,529 58			$669 87
Modoc.							
Modoc County	24	$356 53	$143 04	$499 57	$156 15	$62 64	$218 79
Surprise Valley	35	356 53	208 60	565 13	156 15	91 35	247 50
Total	59			$1,064 70			$466 29

TABLE No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	January 2, 1906.			July 3, 1906.		
		Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.	Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.
Monterey.							
Monterey	24	$356 53	$143 04	$499 57	$156 15	$62 64	$218 79
Pacific Grove	71	356 53	423 16	779 69	156 15	185 31	341 46
Salinas City	92	356 53	548 32	904 85	156 15	240 12	396 27
Total	187			$2,184 11			$956 52
Napa.							
Napa	68	$356 53	$405 28	$761 81	$156 15	$177 48	$333 63
St. Helena	32	356 53	190 72	547 25	156 15	83 52	239 67
Total	100			$1,309 06			$573 30
Nevada.							
Grass Valley	75	$356 53	$447 00	$803 53	$156 15	$195 75	$351 90
Meadow Lake*	17						
Nevada City	72	356 53	429 12	785 65	156 15	187 92	344 07
Total	147			$1,589 18			$695 97
Orange.							
Anaheim	65	$356 53	$387 40	$743 93	$156 15	$169 65	$325 80
Fullerton	68	356 53	405 28	761 81	156 15	177 48	333 63
Los Bolsas	22	356 53	131 12	487 65	156 15	57 42	213 57
Orange	82	356 53	488 72	845 25	156 15	214 02	370 17
Santa Ana	316	356 53	1,883 36	2,239 89	156 15	824 76	980 91
Total	553			$5,078 53			$2,224 08
Placer.							
Placer County	95	$356 53	$566 20	$922 73	$156 15	$247 95	$404 10
Total	95			$922 73			$404 10
Riverside.							
Banning	21	$356 53	$125 16	$481 69	$156 15	$54 81	$210 96
Corona	52	356 53	309 92	666 45	156 15	135 72	291 87
Elsinore*	15						
Hemet	31	356 53	184 76	541 29	156 15	80 91	237 06
Perris	20	356 53	119 20	475 73	156 15	52 20	208 35
Riverside	288	356 53	1,716 48	2,073 01	156 15	751 68	307 83
San Jacinto	24	356 53	143 04	499 57	156 15	62 64	218 79
Total	436			$4,737 74			$2,074 86
Sacramento.							
Elk Grove	26	$356 53	$154 96	$511 49	$156 15	$67 86	$224 01
Sacramento	349	356 53	2,080 04	2,436 57	156 15	910 89	1,067 04
Total	375			$2,948 06			$1,291 05
San Benito.							
Hollister	75	$356 53	$447 00	$803 53	$156 15	$195 75	$351 90
Total	75			$803 53			$351 90
San Bernardino.							
Chino	21	$356 53	$125 16	$481 69	$156 15	$54 81	$210 96
Colton	59	356 53	351 64	708 17	156 15	153 99	310 14
Needles*	15						
Ontario	104	356 53	619 84	976 37	156 15	271 44	427 59
Redlands	291	356 53	1,734 36	2,090 89	156 15	759 51	915 66
San Bernardino	134	356 53	798 64	1,155 17	156 15	349 74	505 89
Total	609			$5,412 29			$2,370 2

: No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

ınd Name hool	Average Daily Attendance.	January 2, 1906. Apportionment on ½ Basis.	January 2, 1906. Apportionment on Attendance.	January 2, 1906. Total Apportionment.	July 3, 1906. Apportionment on ½ Basis.	July 3, 1906. Apportionment on Attendance.	July 3, 1906. Total Apportionment.
Diego.							
ı*	14						
	20	$356 53	$119 20	$475 73	$156 15	$52 20	$208 35
)	72	356 53	429 12	785 65	156 15	187 92	344 07
	26	356 53	154 96	511 49	156 15	67 86	224 01
City	33	356 53	196 68	553 21	156 15	86 13	242 28
	17						
)	326	356 53	1,942 96	2,299 49	156 15	850 86	1,007 01
	477			$4,625 57			$2,025 72
ıncisco.							
ial	379	$356 53	$2,258 84	$2,615 37	$156 15	$989 19	$1,145 34
ial Even'g	306	356 53	1,823 76	2,180 29	156 15	798 66	954 81
	511	356 53	3,045 56	3,402 09	156 15	1,333 71	1,489 86
t Evening	472	356 53	2,813 12	3,169 65	156 15	1,231 92	1,388 07
	640	356 53	3,814 40	4,170 93	156 15	1,670 40	1,826 55
	317	356 53	1,889 32	2,245 85	156 15	827 37	983 52
ıic	245	356 53	1,460 20	1,816 73	156 15	639 45	795 60
	2870			$19,600 91			$8,583 75
ıaquin.							
	60	$356 53	$357 60	$714 13	$156 15	$156 60	$312 75
	323	356 53	1,925 08	2,281 61	156 15	843 03	999 18
	383			$2,995 74			$1,311 93
ı Obispo.							
rande	47	$356 53	$280 12	$636 65	$156 15	$122 67	$278 82
les	65	356 53	387 40	743 93	156 15	169 65	325 80
Obispo	68	356 53	405 28	761 81	156 15	177 48	333 63
	180			$2,142 39			$938 25
Mateo.							
o	45	$356 53	$268 20	$624 73	$156 15	$117 45	$273 60
	72	356 53	429 12	785 65	156 15	187 92	344 07
	117			$1,410 38			$617 67
Barbara.							
	31	$356 53	$184 76	$541 29	$156 15	$80 91	$237 06
rbara	166	356 53	989 36	1,345 89	156 15	433 26	589 41
ria	74	356 53	441 04	797 57	156 15	193 14	349 29
ez Valley	26	356 53	154 96	511 49	156 15	67 86	224 01
	297			$3,196 24			$1,399 77
Clara.							
	65	$356 53	$387 40	$743 93	$156 15	$169 65	$325 80
	63	356 53	375 48	732 01	156 15	164 43	320 58
	17	356 53	101 32	457 85	156 15	44 37	200 52
	79	356 53	470 84	827 37	156 15	206 19	362 34
ı View	33	356 53	196 68	553 21	156 15	86 13	242 28
	143	356 53	852 28	1,208 81	156 15	373 23	529 38
	633	356 53	3,772 68	4,129 21	156 15	1,652 13	1,808 28
ra	142	356 53	846 32	1,202 85	156 15	370 62	526 77
	1175			$9,855 24			$4,315 95
ı Cruz.							
ız	227	$356 53	$1,352 92	$1,709 45	$156 15	$592 47	$748 62
lle	95	356 53	566 20	922 73	156 15	247 95	404 10
	322			$2,632 18			$1,152 72

TABLE No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	January 2, 1906.			July 3, 1906.		
		Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.	Apportionment on ½ Basis.	Apportionment on Attendance.	Total Apportionment.
Shasta.							
Shasta	72	$356 53	$429 12	$785 65	$156 15	$187 92	$344 07
Total	72			$785 65			$344 07
Siskiyou.							
Etna	34	$356 53	$202 64	$559 17	$156 15	$88 74	$244 89
Siskiyou County	41	356 53	244 36	600 89	156 15	107 01	263 16
Total	75			$1,160 06			$508 05
Solano.							
Armijo	74	$356 53	$441 04	$797 57	$156 15	$193 14	$349 29
Benicia	34	356 53	202 64	559 17	156 15	88 74	244 89
Dixon	40	356 53	238 40	594 93	156 15	104 40	260 55
Vacaville	82	356 53	488 72	845 25	156 15	214 02	370 17
Vallejo	86	356 53	512 56	869 09	156 15	224 46	380 61
Total	316			$3,666 01			$1,605 51
Sonoma.							
Cloverdale	22	$356 53	$131 12	$487 65	$156 15	$57 42	$213 57
Healdsburg	60	356 53	357 60	714 13	156 15	156 60	312 75
Petaluma	128	356 53	762 88	1,119 41	156 15	334 08	490 23
Santa Rosa	243	356 53	1,448 28	1,804 81	156 15	634 23	790 38
Sonoma Valley	31	356 53	184 76	541 29	156 15	80 91	237 06
Total	484			$4,667 29			$2,043 99
Stanislaus.							
Modesto	80	$356 53	$476 80	$833 33	$156 15	$208 80	$364 95
Oakdale	37	356 53	220 52	577 05	156 15	96 57	252 72
Total	117			$1,410 38			$617 67
Sutter.							
Sutter City	39	$356 53	$232 44	$588 97	$156 15	$101 79	$257 94
Total	39			$588 97			$257 94
Tehama.							
Corning	52	$356 53	$309 92	$666 45	$156 15	$135 72	$291 87
Red Bluff	90	356 53	536 40	892 93	156 15	234 90	391 05
Total	142			$1,559 38			$682 92
Tulare.							
Dinuba	64	$356 53	$381 44	$737 97	$156 15	$167 04	$323 19
Porterville	66	356 53	393 36	749 89	156 15	172 26	328 41
Tulare	121	356 53	721 16	1,077 69	156 15	315 81	471 96
Visalia	133	356 53	792 68	1,149 21	156 15	347 13	503 28
Total	384			$3,714 76			$1,626 84
Tuolumne.							
Tuolumne County	44	$356 53	$262 24	$618 77	$156 15	$114 84	$270 99
Total	44			$618 77			$270 99
Ventura.							
Oxnard	49	$356 53	$292 04	$648 57	$156 15	$127 89	$284 04
Santa Paula	89	356 53	530 44	886 97	156 15	232 29	388 44
Ventura	112	356 53	667 52	1,024 05	156 15	292 32	448 47
Total	250			$2,559 59			$1,120 95

LE No. 16—APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

and Name School.	Average Daily Attendance.	January 2, 1906.			July 3, 1906.		
		Apportionment on ⅓ Basis.	Apportionment on Attendance.	Total Apportionment.	Apportionment on ⅓ Basis.	Apportionment on Attendance.	Total Apportionment.
olo.							
	18						
Jt. Union	27	$356 53	$160 92	$517 45	$156 15	$70 47	$226 62
d	98	356 53	584 08	940 61	156 15	255 78	411 93
	125			$1,458 06			$638 55
uba.							
le	101	$356 53	$601 96	$958 49	$156 15	$263 61	$419 76
	101			$958 49			$419 76

APPORTIONMENT OF JANUARY 2, 1906.

mber of High Schools entitled to receive State aid June 30, 1905	158
erage daily attendance in such schools	18,876
school on one-third basis	$356 53
child on average daily attendance	$5 96
apportioned on one-third basis	$56,331 74
apportioned on average daily attendance	$112,500 96
portioned	$168,832 70
unapportioned	$164 66

—Those schools marked (*) had an attendance of less than 20 and under the law o apportionment. Those schools marked (†) have held school but one year ording to law, receive State aid.

APPORTIONMENT OF JULY 3, 1906.

school on one-third basis	$156 15
child on average daily attendance	$2 61
apportioned on one-third basis	$24,671 70
apportioned on average daily attendance	$49,266 36
ount apportioned	$73,938 06
on hand unapportioned	$85 31

igh schools fell below 20 in average daily attendance for the year closing June and received no State aid. Four fell below 20 in attendance, but received State g to the provision that the average attendance for the first year need not exceed se have been marked by dagger (†). See apportionment for January, 1906.

STATISTICS OF HIGH

FRESNO

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1906.				
Clovis	Union	G. H. Wilkinson	L. S. Beall	185
Fowler	Union	J. N. Keran	Edwin Gower	195
Fresno	City	A. C. Olney	C. L. McLane	195
Kingsburg	JtUnion	Mabel Hust	P. F. Adelsbach	180
Laton	Union	T. M. Marshall	Chas. W. Hardman	180
Lemoore, (See Kings County)				
Reedley	JtUnion	Miss K. M. Carrier	W. H. Carpenter	190
Sanger	Union	R. Y. Glidden	J. J. Edgar	190
Selma	Union	S. S. Ray	W. F. Chandler	190
Washington, Easton	Union	Osmer Abbott	E. M. Drury	180

GLENN

1905.				
Glenn County, Willows	County	M. W. Smith	F. S. Reager	190
Orland	JtUnion	L. M. Reager	T. J. Hicks	190
1906.				
Glenn County, Willows	County	J. R. Hanlon	F. S. Reager	200
Orland	JtUnion	L. M. Reager	T. J. Hicks	190

HUMBOLDT

1905.				
Arcata	Union	J. M. Horton	W. W. Stone	200
Eureka	City	A. C. Barker	A. C. Barker	200
Ferndale	Union	R. W. Coddington	M. C. Decarli	189
Fortuna	District	P. S. Inskip	C. W. Seffens	190
1906.				
Arcata	Union	J. M. Horton	W. W. Stone	200
Eureka	City	A. C. Barker	A. C. Barker	200
Ferndale	Union	R. H. Van Horn	M. C. Decarli	200
Fortuna	Union	P. S. Inskip	C. W. Seffens	200

INYO

1905.				
Bishop	Union	J. M. Hahn	Mrs. M. F. Collins	180
1906.				
Bishop	Union	A. M. Brooks	Mary E. Gish	181

KERN

1905.				
Kern County, Bakersfield	County	C. C. Childress	R. L. Stockton	180
1906.				
Kern County, Bakersfield	County	C. C. Childress	R L. Stockton	183

o. 17.

IGH SCHOOLS.

UNTY.

Teachers employed.		Pupils Enrolled.		Average Daily Attendance	Number of Graduates.		Financial.			No. of Volumes in Library
Men	Women	Boys	Girls		Boys	Girls	Receipts.	Expenditures.	Total Valuation of All Property.	
5	9	200	282	349	20	31	$23,203 31	$19,234 25	$575,500 00	1,054
10	13	357	427	627	41	39	35,370 97	34,416 06	691,000 00	2,025
10	20	448	702	839	34	8	72,863 66	73,368 98	302,800 00 56,550 00	1,500
7	8	170	242	281	29	38				
1	3	40	40	59	5	4	13,027 61	6,485 80	18,000 00	1,015
1	5	29	42	61	1	7	10,030 16	7,616 85	14,500 00	1,050
1	4	22	41	53	1	6	10,520 74	8,988 20	15,525 00	775
6	9	179	297	347	23	32	23,594 25	19,064 06	76,100 00	1,100
9	18	454	511	733	41	65	38,343 20	39,146 60	80,500 00	2,100
11	20	483	662	804	40	60	73,384 48	73,384 48	203,100 00 61,150 00	900
7	8	141	273	258	11	30				300
1	4	40	42	64	5	2	13,629 08	7,810 60	19,250 00	1,056
1	4	37	45	70	5	3	8,630 26	7,085 42	14,700 00	1,100
1	6	36	52	60	7	10	8,915 51	7,570 89	15,550 00	800
1	5	74	121	148	2	7	14,383 90	11,114 07	4,500 00	500

UNTY.

1	2	26	36	49	3	4	$5,387 02	$5,058 41	$5,295 00	200
1	2	28	31	50	3	5	4,690 97	4,638 00	5,735 00	201

UNTY.

2	3	79	70	122	2	4	$55,825 05	$47,851 50	$45,950 00	354
1	1	8	18	21	------	3	3,518 23	2,710 25	998 00	225
1	2	28	33	54	7	8	9,874 99	9,698 09	8,485 00	375
2	5	88	95	141	12	18	23,500 47	16,384 01	44,500 00	373
1	2	11	28	33	1	1	5,661 62	3,285 73	830 00	200
1	2	28	31	51	6	9	7,124 97	6,398 48	8,490 00	390

UNTY.

1	1	9	31	32	0	0	$2,968 83	$2,344 40	$2,730 00	75
2	0	13	32	35	0	0	3,226 90	28 85	455 00	50

STATISTICS OF HIGH

COLUSA

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1905.				
Colusa	District	A. B. Anderson	Thomas Rutledge	188
Pierce, College City	Jt Union	D. W. Lindsay	J. E. Cain	189
1906.				
Colusa	District	A. B. Anderson	Thomas Rutledge	189
Pierce, College City	Jt Union	D. W. Lindsay	J. E. Cain	190

CONTRA COSTA

1905.				
Alhambra, Martinez	Union	E. W. Stoddard	M. R. Jones	188
John Swett, Crockett	Union	L. K. Webb	L. N. Buttner	188
Liberty, Brentwood	Union	Geo. C. Russell	O. C. Wristen	191
Mt. Diablo, Concord	Union	Geo. W. Wright	Mrs. James Hook	189
Riverview, Antioch	Union	W. S. Moore	W. C. Lewis	188
1906.				
Alhambra, Martinez	Union	E. W. Stoddard	M. R. Jones	189
John Swett, Crockett	Union	L. K. Webb	L. N. Buttner	186
Liberty, Brentwood	Union	Geo. C. Russell	O. C. Wristen	187
Mt. Diablo, Concord	Union	Herbert Kittredge	Mrs. James Hook	189
Riverview, Antioch	Union	W. S. Moore	W. C. Lewis	190

DEL NORTE

1905.				
Del Norte, Crescent City	County	E. E. Grinnell	Mrs. A. M. Leishman	191
1906.				
Del Norte, Crescent City	County	E. E. Grinnell	Mrs. A. M. Leishman	200

EL DORADO

1906.				
El Dorado Co., Placerville	County	E. N. Mabrey	S. B. Wilson	180

FRESNO

1905.				
Clovis	Union	G. H. Wilkinson	J. H. Cadwallader	187
Fowler	Union	J. N. Keran	Edwin Gower	195
Fresno	City	A. C. Olney	G. W. Cherry	177
Lemoore	Jt Union	Geo. W. Hinkle	R. C. McKenna	
Reedley	Jt Union	Allyn O. Taylor	W. H. Carpenter	180
Sanger	Union	R. Y. Glidden	J. J. Edgar	190
Selma	Union	S. S. Ray	W. F. Chandler	190
Washington, Easton	Union	Osmer Abbott	E. M. Drury	180

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
1	2	32	47	64	4	7	$6,429 07	$5,655 12	$22,600 00	730
1	2	10	18	24	3	4	5,355 47	4,826 81	12,000 00	1,000
1	3	34	49	65	3	9	7,372 73	5,182 38	22,900 00	550
1	3	10	20	25	1	3	4,615 00	4,537 83	12,000 00	1,000

COUNTY.

1	2	16	24	31	-----	4	$7,491 32	$5,078 37	$11,970 00	150
2	2	17	26	35	1	1	5,813 20	4,670 03	1,566 00	267
1	2	16	17	27	1	1	5,018 71	3,047 46	875 00	220
1	2	35	27	55	5	3	1,662 23	9,050 31	13,000 00	425
1	1	15	24	28	-----	----	4,427 46	2,361 27	505 00	85
1	3	11	32	39	4	6	8,261 52	5,384 10	12,683 00	242
1	3	18	30	37	3	7	7,388 84	5,403 20	2,813 00	635
1	2	22	19	32	3	6	5,384 87	3,380 01	850 00	250
2	2	40	32	60	8	5	15,764 06	14,388 41	16,050 00	600
1	2	20	26	38	0	0	4,730 33	3,585 81	1,030 00	570

COUNTY.

1	2	11	24	26	-----	3	$3,358 18	$3,250 00	$4,800 00	267
1	2	18	31	40	1	2	3,239 00	3,110 50	4,800 00	267

COUNTY.

2	0	29	39	59	0	0	$19,107 06	$16,736 44	$13,169 00	313

COUNTY.

1	2	21	27	38	2	1	$3,609 07	$3,674 19	$8,400 00	150
1	2	18	31	43	2	1	3,913 16	3,787 70	11,950 00	790
5	7	170	235	309	8	30	37,492 98	27,092 00	104,200 00	1,600
-----	-----	-----	-----	-----	-----	-----	697 72	508 45	-----------	------
1	2	11	21	25	1	8	5,036 66	2,196 04	1,282 00	166
2	2	24	39	43	1	3	7,327 51	4,854 37	7,075 00	500
2	2	37	83	97	5	11	10,506 34	10,464 97	16,645 00	826
1	2	27	31	51	2	3	5,170 56	4,880 45	11,575 00	680

STATISTICS OF HIGH

FRESNO

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term in Days Taught.
1906.				
Clovis	Union	G. H. Wilkinson	L. S. Beall	185
Fowler	Union	J. N. Keran	Edwin Gower	195
Fresno	City	A. C. Olney	C. L. McLane	195
Kingsburg	JtUnion	Mabel Hust	P. F. Adelsbach	180
Laton	Union	T. M. Marshall	Chas. W. Hardman	180
Lemoore, (See Kings County)				
Reedley	JtUnion	Miss K. M. Carrier	W. H. Carpenter	190
Sanger	Union	R. Y. Glidden	J. J. Edgar	190
Selma	Union	S. S. Ray	W. F. Chandler	190
Washington, Easton	Union	Osmer Abbott	E. M. Drury	180

GLENN

1905.				
Glenn County, Willows	County	M. W. Smith	F. S. Reager	190
Orland	JtUnion	L. M. Reager	T. J. Hicks	190
1906.				
Glenn County, Willows	County	J. R. Hanlon	F. S. Reager	200
Orland	JtUnion	L. M. Reager	T. J. Hicks	190

HUMBOLDT

1905.				
Arcata	Union	J. M. Horton	W. W. Stone	200
Eureka	City	A. C. Barker	A. C. Barker	200
Ferndale	Union	R. W. Coddington	M. C. Decarli	185
Fortuna	District	P. S. Inskip	C. W. Seffens	190
1906.				
Arcata	Union	J. M. Horton	W. W. Stone	200
Eureka	City	A. C. Barker	A. C. Barker	200
Ferndale	Union	R. H. Van Horn	M. C. Decarli	200
Fortuna	Union	P. S. Inskip	C. W. Seffens	200

INYO

1905.				
Bishop	Union	J. M. Hahn	Mrs. M. F. Collins	180
1906.				
Bishop	Union	A. M. Brooks	Mary E. Gish	181

KERN

1905.				
Kern County, Bakersfield	County	C. C. Childress	R. L. Stockton	180
1906.				
Kern County, Bakersfield	County	C. C. Childress	R L. Stockton	183

SCHOOLS—Continued.

COUNTY—Continued.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance	Number of Graduates.		Financial.			No. of Volumes in Library
Men	Women	Boys	Girls		Boys	Girls	Receipts.	Expenditures.	Total Valuation of All Property.	
1	2	23	27	39	1	6	$4,478 40	$4,316 38	$9,250 00	1,325
1	2	21	32	48	1	5	5,384 05	3,926 52	11,750 00	710
7	6	160	226	301	18	21	31,000 59	21,856 68	98,000 00	747
0	1	8	9	13	0	0	1,472 17	1,176 95	760 00	.....
1	0	12	16	23	.....	.....	2,470 91	1,602 21	350 00	110
							1,046 70			
0	3	11	20	25	1	2	16,956 34	14,624 56	14,742 00	205
2	2	17	43	48	3	3	7,621 24	5,681 77	7,175 00	540
2	3	47	75	113	6	9	10,939 52	9,695 39	19,750 00	908
1	3	27	30	48	2	4	6,897 55	5,159 01	11,725 00	680

COUNTY.

2	2	19	23	36	4	9	$6,970 23	$4,997 22	$10,800 00	575
1	1	15	18	23	2	1	3,332 67	2,427 04	4,450 00	250
2	2	20	22	35	4	5	6,337 08	5,794 89	11,150 00	750
1	1	9	9	12	0	0	2,602 68	2,296 12	4,575 00	317

COUNTY.

1	2	17	24	37	1	5	$6,001 37	$4,586 26	$7,850 00	270
3	4	79	133	183	6	18	10,403 58	10,203 15	2,075 00	711
1	1	10	16	21	.....	.....	4,912 33	4,665 78	2,705 00	59
1	1	15	15	26	2	.....	3,165 51	2,724 05	512 00	61
1	2	18	30	39	2	1	$5,579 29	$3,835 18	$8,150 00	270
3	4	104	141	199	10	21	10,520 76	10,400 56	1,975 00	790
1	1	13	29	36	0	0	4,259 25	3,349 32	2,930 00	59
1	1	19	26	36	5	2	2,856 28	2,394 23	711 00	85

COUNTY.

1	1	13	19	21	2	4	$2,854 81	$2,199 73	$635 00	233
1	1	16	24	32	0	1	2,169 82	2,148 39	390 00	260

COUNTY.

3	4	80	131	164	6	21	$14,454 80	$13,302 85	$38,000 00	1,031
3	6	88	125	174	9	22	14,191 70	14,121 38	43,000 00	1,125

STATISTICS OF HIGH

KINGS

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term (Number of Days Taught).
1905.				
Hanford	Union	E. H. Walker	G. W. Murray	[illegible]
Lemoore	Jt Union	Geo. W. Hinkle	R. E. McKenna	[illegible]
1906.				
Hanford	Union	E. H. Walker	G. W. Murray	[illegible]
Kingsburg	Jt Union	Mabel Hust	P. F. Adelsbach	[illegible]
Lemoore	Jt Union	J. M. Hahn	R. E. McKenna	[illegible]

LAK

1905.				
Clear Lake, Lakeport	Union	Ovid H. Ritter	W. L. Rideout	[illegible]
1906.				
Clear Lake, Lakeport	Union	A. A. Mackenzie	W. L. Rideout	[illegible]

LASSEN

1905.				
Susanville	County	F. C. Schofield	J. F. Dixon	189
1906.				
Susanville	County	F. C. Schofield	J. F. Dixon	180

LOS ANGELES

1905.				
Alhambra	City	A. C. Wheat	F. E. Williams	189
Bonita, Lordsburg	Union	L. L. Evans	L. S. Thacker	200
Citrus, Azusa	Union	Wm. A. Sheldon	Asa Hall	200
Compton	Union	W. L. Frew	M. P. McDonald	199
Covina	City	A. L. Hamilton	L. L. Ratekin	190
El Monte	Union	Warren Loree	P. F. Coggswell	200
Excelsior, Norwalk	Union	J. L. Anderson	G. R. Frampton	189
Glendale	Union	G. W. Moyse	E. D. Goode	200
Hollywood	Union	J. O. Churchill	A. N. Denman	195
Jewel, Gardena	Union	M. R. Jacobs	D. J. Moody	200
Long Beach	City	J. J. Morgan	J. W. Wood	197
Los Angeles	City	W. H. Housh	N. S. Averill	200
Los Angeles Polytechnic	City	J. H. Francis	N. S. Averill	200
Los Nietos Valley, Downey	Union	E. A. Farrington	A. L. Ball	186
Monrovia	City	N. F. Smith	M. R. Williams	189
Pasadena	City	Leroy D. Eley	E. A. Walker	180
Pomona	City	P. W. Kauffman	W. B. Stewart	188
San Fernando, Fernando	Union	Mrs. E. C. Ingham	R. H. Hille	197
San Pedro	City	H. F. Pinnell	E. Mahar	198
Santa Monica	City	D. A. Eckert	R. M. Miller	187
South Pasadena	City	Noble Harter	G. A. Green	179
Whittier	Union	G. W. Monroe	O. M. Sonden	199
Wilmington	Union	A. C. Smith	A. Young	199

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
5	3	63	100	129	8	17	$10,244 95	$8,846 66	$16,000 00	1,000
1	2	10	26	26	.....	5	5,967 87	3,993 87	13,300 00	282
3	5	84	113	149	17	16	11,390 31	10,492 83	17,000 00	1,000
.....	.....	1	0	1	0	0	258 38	133 35	.....	.....
1	2	18	23	27	0	0	6,671 61	5,022 39	17,500 00	447

COUNTY.

2	2	31	53	75	3	13	$4,464 14	$4,043 17	$5,300 00	565
2	2	30	62	79	2	8	5,794 59	5,285 93	5,950 00	595

COUNTY.

2	1	24	31	46	.....	.....	$5,642 76	$4,826 23	$1,950 00	250
3	0	20	34	48	3	4	5,552 02	5,071 72	2,275 00	375

COUNTY.

1	3	30	37	58	1	7	$51,531 38	$20,897 34	$1,000 00	500
1	2	23	15	33	.....	.....	35,404 18	26,496 81	29,700 00	125
1	3	42	47	68	4	3	11,167 66	7,710 48	21,850 00	630
1	6	54	64	92	7	10	10,280 77	8,655 30	21,500 00	1,000
1	5	29	42	62	5	5	11,553 93	8,378 07	12,100 00	853
1	1	15	17	23	.....	3	19,972 19	2,505 10	1,150 00	297
1	2	23	24	37	1	2	5,373 23	3,338 57	450 00	75
1	4	22	43	50	.....	4	10,104 40	6,567 09	17,475 00	530
1	5	43	50	80	1	2	78,025 87	41,606 31	60,600 00	197
1	1	3	15	18	.....	.....	2,840 12	2,348 44	335 00	70
3	8	120	151	201	11	11	35,016 35	27,739 65	72,500 00	1,491
15	33	668	992	1366	66	83	102,697 23	102,588 82	119,400 00	3,265
8	9	283	224	472	18	15	23,359 22	23,286 39	34,475 00	282
2	2	29	43	57	2	7	5,213 68	4,144 21	875 00	96
1	5	38	70	90	3	3	10,063 52	9,007 76	1,650 00	450
6	14	214	336	443	18	31	29,043 41	24,024 01	121,100 00	550
2	8	96	105	156	8	14	12,592 35	12,586 97	61,925 00	1,051
1	3	23	19	32	4	3	29,639 85	5,380 35	1,675 00	1,025
1	3	13	9	17	.....	.....	51,785 44	10,670 66	7,550 00	213
1	4	37	72	85	1	9	9,450 18	8,025 43	22,200 00	1,100
.....	.....	1	4	5	.....	.....	.....	.....	.....	.....
4	6	67	87	131	5	15	83,273 65	77,435 91	75,850 00	475
1	1	7	9	11	.....	.....	5,770 86	3,151 95	212 00	11

STATISTICS OF HIGH

LOS ANGELES

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1906.				
Alhambra	District	A. C. Wheat	F. E. Williams	19
Bonita, Lordsburg	Union	L. L. Evans	L. S. Thacker	20
Citrus, Azusa	Union	Wm. A. Sheldon	P. C. Daniels	20
Compton	Union	W. L. Frew	M. P. McDonald	20
Covina	District	A. L. Hamilton	J. D. Reed	18
El Monte	Union	Warren Loree	P. F. Coggswell	18
Excelsior, Norwalk	Union	Henry Kerr	G. R. Frampton	19
Glendale	Union	Geo. W. Moyse	E. D. Goode	19
Hollywood	Union	J. O. Churchill	A. N. Denman	19
Inglewood	Union	M. Nina Martin	D. W. Griffith	19
Jewel, Gardena	Union	Mark R. Jacobs	D. J. Moody	20
Long Beach	District	J. J. Morgan	J. W. Wood	19
Los Angeles	City	W. H. Housh	N. S. Averill	19
Los Angeles Polytechnic	City	J. H. Francis	N. S. Averill	19
Los Nietos Valley, Downey	Union	E. A. Farrington	T. R. Crawford	18
Monrovia	District	Nathan F. Smith	M. R. Williams	18
Pasadena	City	Leroy D. Ely	M. W. Davis	18
Pomona	City	P. W. Kauffman	W. B. Stewart	18
Redondo	Union	Florence H. Fortson	P. S. Venable	18
San Fernando, Fernando	Union	Mrs. E. C. Ingham	R. H. Hille	19
San Pedro	District	H. S. Pinnell	Ed. Mahar	19
Santa Monica	City	D. A. Eckert	R. M. Miller	18
South Pasadena, Pasadena	District	Noble Harter	Geo. A. Green	18
Whittier	Union	G. Walter Monroe	A. C. Johnson	19
Wilmington	Union	A. C. Smith	A. Young	19

MADERA

1905.				
Madera	Union	E. B. Williams	F. P. Roberts	18
1906.				
Madera	Union	E. B. Williams	J. G. Roberts	18

MARIN

1905.				
San Rafael	City	John S. Drew	R. G. Lichtenberg	20
1906.				
San Rafael	City	John S. Drew	G. H. Lichtenberg	18

MENDOCINO

1905.				
Fort Bragg	Union	O. F. Barth	A. L. Rafferty	18
Mendocino	County	Wayne P. Smith	J. F. Barbee	18
Point Arena	Union	J. C. Christenson	J. C. Halliday	18
Round Valley, Covelo	Union	R. W. Everett	G. W. Cummins	18
Ukiah	County	L. W. Babcock	J. F. Barbee	19
Willits	Union	W. H. Hensey	Geo. Yonde	18

CHOOLS—Continued.

OUNTY—Continued.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
1	3	40	42	67	5	7	$35,943 87	$35,332 86	$51,150 00	300
1	3	30	25	40	4	2	16,526 27	12,267 61	33,780 00	325
2	2	37	50	68	3	4	13,201 64	8,587 85	22,975 00	625
2	6	50	64	96	8	13	12,548 23	10,466 25	23,900 00	1,000
1	5	36	52	72	3	3	12,547 56	10,244 35	12,275 00	1,060
1	2	21	27	38	1	1	24,816 94	22,289 83	20,980 00	402
1	2	12	21	27	2	2	3,843 78	3,571 33	1,010 00	121
2	3	31	38	57	4	7	9,412 67	6,600 48	17,800 00	650
3	4	66	84	128	6	6	55,138 04	49,090 53	68,600 00	611
------	2	3	20	16	------	------	6,951 91	3,623 28	870 00	354
1	2	12	20	28	1	------	5,787 12	3,906 46	475 00	122
1	11	128	211	255	8	15	40,093 65	32,841 53	109,750 00	2,122
16	32	610	1014	1335	81	134	90,221 85	79,462 40	198,700 00	3,800
16	23	636	572	1,061	------	2	331,283 42	123,103 75	309,480 00	312
1	3	26	39	56	------	4	27 503 35	25,833 36	20,750 00	128
1	6	46	73	91	5	6	11,009 12	8,346 79	1,750 00	500
5	18	253	392	504	29	32	34,083 98	25,607 58	113,800 00	1,100
2	7	109	137	190	9	14	13,332 80	11,362 81	64,000 00	1,282
0	2	2	12	9	------	------	30,116 86	17.879 22	23,837 00	48
1	3	17	21	32	1	3	30,981 57	5,676 54	2,050 00	1,200
2	2	14	30	38	3	------	66,337 67	39,205 24	83,850 00	817
1	6	54	78	104	2	9	9,643 84	9,641 16	2,700 00	761
2	1	23	34	42	------	------	73,783 71	21,231 49	17,450 00	121
4	9	103	109	172	2	17	23,208 56	17,286 40	78,535 00	850
1	1	2	10	11	------	------	7,903 79	2,686 50	225 00	24

OUNTY.

2	2	28	44	66	2	3	$23,169 81	$21,488 74	$38,150 00	600
2	2	27	44	59	3	12	9,776 39	6,579 36	40,000 00	600

OUNTY.

1	4	38	78	98	4	10	$9,091 42	$7,469 09	$24,300 00	400
2	4	46	96	115	5	19	8,783 04	8,338 80	24,800 00	400

OUNTY.

1	1	23	49	53	2	4	$8,391 25	$4,812 20	$3,800 00	305
3	1	23	28	44	4	8	6,521 17	5,637 32	9,800 00	834
1	------	5	14	13	------	------	2,705 14	1,620 01	384 00	103
1	1	7	13	13	------	------	10,434 30	9,463 04	5,778 00	135
3	3	57	38	84	8	6	7,365 02	7,233 11	14,350 00	400
1	1	13	15	17	------	------	3,595 84	2,717 63	4,000 00	68

STATISTICS OF HIGH

MENDOCINO

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1906.				
Fort Bragg	Union	O. F. Barth	A. A. Lord	187
Mendocino	County	O. H. Ritter	J. F. Barbee	190
Point Arena	Union	U. H. Nicholson	J. C. Halliday	179
Round Valley, Covelo	Union	R. W. Everett	G. W. Cummins	190
Ukiah	County	L. W. Babcock	J. F. Barbee	192
Willits	Union	Roger Phillips	E. F. Sorfiguer	188

MERCED

1905.				
Merced	County	J. B. Hughes	Anna Silman	1
West Side, Los Banos	Union	Geo. H. Hunting	Dr. C. F. Wade	1
1906.				
Merced	County	J. B. Hughes	Anna Silman	1
West Side, Los Banos	Union	Geo. H. Hunting	W. L. Garrison	1

MODOC

1905.				
Modoc County, Alturas	County	Geo. B. Finnegan	Nellie Forest	18
Surprise Valley, Cedarville	Union	Anthony Rose	John Fritz	20
1906.				
Modoc County, Alturas	County	Geo. B. Finnegan	Nellie Forest	20
Surprise Valley, Cedarville	Union	Anthony Rose	John Fritz	20

MONTEREY

1905.				
Monterey	Union	I. Passmore	J. K. Oliver	186
Pacific Grove	District	C. H. Meeker	Dr. W. V. Grimes	187
Salinas	City	L. E. Kilkenny	L. E. Kilkenny	186
1906.				
Monterey	Union	C. H. Meeker	G. O. DeWitt	189
Pacific Grove	District	Albert G. Morse	A. Blohm	185
Salinas	City	L. E. Kilkenny	L. E. Kilkenny	181

NAPA

1905.				
Napa	District	F. O. Mower	J. B. Newman	188
St. Helena	Union	J. A. Metzler	A. N. Bell	195
1906.				
Napa	District	F. O. Mower	J. B. Newman	187
St. Helena	Union	R. E. Chase	A. N. Bell	187

CHOOLS—Continued.

COUNTY—Continued.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
2	2	21	43	51	.....	.....	$28,494 79	$11,265 76	$3,800 00	481
2	2	19	27	37	4	3	8,481 55	5,908 09	9,900 00	645
1	1	5	14	14	.....	.....	3,638 04	3,018 53	.....	.....
1	1	14	14	23	.....	.....	4,285 44	3,856 36	6,028 00	200
3	3	69	61	108	11	5	8,986 93	7,608 34	14,450 00	718
1	3	16	16	24	.....	.....	18,575 58	5,580 98	450 00	174

COUNTY.

4	1	41	84	106	9	17	$12,897 38	$10,776 81	$27,450 00	1,450
1	2	11	22	31	2	3	4,444 17	4,270 17	16,600 00	775
3	2	29	86	95	4	15	11,886 11	9,607 49	28,150 00	5,300
2	2	15	25	35	3	2	5,183 28	4,904 93	16,800 00	850

COUNTY.

1	1	8	28	24	.....	.....	$4,636 67	$3,798 53	$2,000 00	350
1	1	12	31	35	.....	.....	3,605 28	2,593 55	560 00	143
1	2	21	26	34	.....	3	5,288 95	4,755 43	1,950 00	550
1	2	21	43	52	.....	.....	13,458 26	12,100 62	10,290 00	372

COUNTY.

1	3	14	21	24	.....	.....	$4,124 13	$3,971 84	$1,700 00	250
2	2	32	51	71	5	10	6,607 29	5,731 11	2,700 00	496
3	2	53	66	92	6	14	6,952 01	6,024 27	31,275 00	835
2	3	21	21	37	4	5	5,131 09	4,874 22	22,000 00	364
2	2	37	49	61	4	9	6,751 82	5,203 17	2,700 00	496
3	2	44	77	102	4	5	6,478 06	5,541 98	31,325 00	875

COUNTY.

2	2	31	49	68	5	4	$11,381 12	$5,760 93	$14,000 00	700
1	2	16	26	32	5	4	4,950 23	3,722 89	1,260 00	487
2	3	45	59	83	5	4	12,889 50	6,941 28	14,200 00	800
1	3	20	34	46	1	6	5,374 84	5,170 09	1,450 00	587

STATISTICS OF HIGH

NEVADA

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1905.				
Grass Valley	District	J. S. Hennessy	A. B. Champion	184
Meadow Lake, Truckee	Union	Leroy H. Stephens	C. F. McGlashan	188
Nevada City	District	E. H. Barker	L. S. Calkins	189
1906.				
Grass Valley	District	J. S. Hennessy	A. B. Champion	186
Meadow Lake, Truckee	Union	Leroy H. Stephens	C. F. McGlashan	175
Nevada City	District	E. H. Barker	L. S. Calkins	190

ORANGE

1905.				
Anaheim	City	Inez Payton	A. L. Lewis	199
Fullerton	Union	W. R. Carpenter	William Starbuck	190
Los Bolsas	Union	Edward Soloman	F. F. Skelly	188
Orange	Union	C. E. Taylor	Wm. M. Gregg	197
Santa Ana	City	E. B. Oakley	J. A. Beatty	185
1906.				
Anaheim	City	J. F. Walker	W.O.F.Schweinckert	190
Fullerton	Union	W. R. Carpenter	Wm. Starbuck	190
Los Bolsas	Union	Edward Soloman	J. M. Cain	200
Orange	Union	Chas. E. Taylor	Wm. M. Gregg	200
Santa Ana	City	J. C. Templeton	John Beatty	185

PLACER

1905.				
Placer County, Auburn	County	F. J. Buchanan	C. N. Shane	190
1906.				
Placer County, Auburn	County	F. J. Buchanan	C. N. Shane	190

RIVERSIDE

1905.				
Banning	District	Geo. M. Sheldon	Geo. C. King	180
Corona	District	J. C. Ray	D. M. Browning	180
Elsinore	Union	F. L. Osenburg	L. B. Peek	180
Hemet	Union	E. T. Boughn	S. W. Leffingwell	880
Perris	Union	A. C. Burke	H. A. Smith	180
Riverside	District	Eugenie Fuller	S. C. Evans	180
San Jacinto	District	Paul G. Ward	O. W. Mellor	180
1906.				
Banning	District	Geo. M. Sheldon	Geo. C. King	180
Corona	District	J. C. Ray	D. M. Browning	180
Elsinore	Union	F. L. Greene	L. B. Peek	180
Hemet	Union	E. T. Boughn	S. W. Leffingwell	180
Perris	Union	Walter C. Maloy	Homer Smith	180
Riverside	District	Eugenie Fuller	S. C. Evans	180
San Jacinto	District	Paul G. Ward	Jay Swezea	180

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
1	3	40	52	75	4	5	$4,163 65	$4,303 65	$1,200 00	110
1	2	12	14	17	1	1	8,090 00	4,181 95	11,175 00	356
1	2	31	53	72	7	4	4,407 87	4,284 03	1,030 00	330
3	3	42	49	81	3	6	3.347 11	4,630 53	1,150 00	116
1	2	5	15	13	2	1	7,876 76	4,635 87	11,825 00	378
1	2	28	52	67	3	11	3,563 47	4,389 17	1,700 00	700

COUNTY.

-----	7	37	44	65	9	8	$9,387 45	$6,750 15	$16,925 00	6,500
1	5	34	42	68	7	6	12,347 04	7,365 34	12,100 00	650
1	2	20	13	22	-----	-----	6,852 03	2,800 68	1,600 00	40
2	4	38	58	82	2	5	43,807 03	27,270 97	37,000 00	1,400
6	8	168	238	316	14	43	16,702 54	13,080 66	55,600 00	2,007
2	5	30	38	58	3	3	11,513 01	8,592 92	17,925 00	705
1	5	30	35	60	2	8	16,295 27	12,449 10	16,900 00	800
2	2	14	10	16	3	1	6,313 35	5,131 38	1,400 00	200
3	5	56	73	112	7	8	24,029 78	10,835 23	37,200 00	1,600
6	10	153	232	291	20	29	19,892 90	19,892 90	55,600 00	2,177

COUNTY.

2	3	51	70	95	4	7	$8,415 37	$8,075 60	$7,000 00	1,018
2	3	59	78	99	9	9	44,448 84	11,167 92	7,580 00	1,119

COUNTY.

1	1	13	13	21	5	1	$976 30	$758 46	$6,650 00	947
1	3	30	36	52	3	4	7,685 72	6,627 14	1,325 00	400
1	-----	12	10	15	-----	1	1,407 39	1,093 96	625 00	360
1	2	21	21	31	3	1	4,287 47	4,131 90	11,200 00	450
1	1	10	13	20	2	-----	2,625 22	1,703 84	700 00	151
5	5	179	176	288	16	162	3,093 68	13,724 15	79,600 00	1,344
1	1	10	17	24	-----	-----	2,152 28	1,417 73	675 00	215
2	1	16	22	24	1	4	699 53	698 53	6,725 00	1,042
1	4	34	44	59	1	4	8,462 59	7,143 72	1,600 00	300
1	1	15	12	20	1	-----	2,119 15	1,589 47	390 00	400
1	2	30	31	38	1	3	3,850 61	3,251 06	11,700 00	550
2	1	17	21	20	2	2	2,278 63	2,134 28	475 00	155
5	6	180	200	314	24	25	17,789 44	18,424 77	79,800 00	1,445
1	1	12	17	23	2	3	2,316 81	1,022 96	685 00	220

STATISTICS OF HIGH

SACRAMENTO

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term (Number of Days Taught)
1905.				
Elk Grove	Union	T. B. Smith	E. W. Springsted	189
Sacramento	City	Frank Tade	O. W. Erlewine	187
1906.				
Elk Grove	Union	Curtis B. Locklin	E. W. Springsted	191
Sacramento	City	Frank Tade	O. W. Erlewine	189

SAN BENIT

1905.				
Hollister	County	J. P. Davis	J. H. Garner	1
1906.				
Hollister	County	J. P. Davis	J. H. Garner	1

SAN BERNARDIN

1905.				
Chino	District	Wm. R. Murphey	Edwin Rhodes	18
City of San Bernardino	City	Will L. Brown	D. C. Schlott	18
Colton	District	Geo. M. Green	J. A. Champion	18
Needles	District	J. H. Dysinger	James Carroll	18
Ontario	District	Jefferson Taylor	E. H. Jolliffe	18
Redlands	Union	Lewis B. Avery	C. L. Hayes	18
1906.				
Chino	District	Wm. R. Murphey	Edwin Rhodes	180
City of San Bernardino	City	L. M. Terman	F. W. Conrad	180
Colton	District	Geo. M. Green	L. O. Emery	180
Needles	District	Jefferson Taylor	E. H. Jolliffe	180
Ontario	District	J. H. Dysinger	James Carroll	180
Redlands	Union	Lewis B. Avery	C. L. Hayes	180

SAN DIEGO

1905.				
Cuyamaca, Julian	Union	C. P. Evans	I. B. Williams	200
El Cajon, Bostonia	Union	R. G. Estep	Geo. C. Shepard	180
Escondido	City	J. F. Walker	G. V. Thomas	180
Fallbrook	Union	C. T. Meredith	P. A. Johnson	200
National City	City	T. F. Brownscombe	W. F. Burlingame	198
Ramona	Union	W. O. Lowe	Chas. L. Slone	180
San Diego	City	Duncan McKinnon	J. P. Haddock	190
1906.				
Cuyamaca, Julian	Union	C. P. Evans	James Green	185
El Cajon, Bostonia	Union	R. G. Estep	Geo. C. Shepard	171
Escondido	City	U. G. Durfee	Dr. Edward Buell	188
Fallbrook	Union	C. T. Mededith	A. J. Clark	191
National City	City	T. F. Brownscombe	Chas. R. Ogden	189
Ramona	Union	W. Olin Lowe	E. F. Bowen	171
San Diego	City	Duncan McKinnon	Percy Woods	189

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
1	2	16	16	26	1	3	$3,769 87	$3,570 25	$5,000 00	342
4	10	187	259	349	17	26	28,013 55	20,743 10	28,225 00	700
1	2	19	15	30	-----	-----	3,629 28	3,601 10	4,600 00	341
4	11	198	267	370	16	42	233,392 78	75,203 95	29,225 00	725

COUNTY.

2	2	41	59	75	9	9	$4,527 54	$4,398 00	$1,335 00	265
2	3	35	68	91	10	14	6,588 99	6,338 89	1,460 00	290

COUNTY.

1	1	9	24	21	1	4	$5,412 67	$4,002 92	$1,500 00	750
3	5	65	111	134	9	15	12,507 14	11,652 15	80,500 00	985
2	3	29	40	59	5	7	11,935 71	7,864 93	3,900 00	944
2	-----	11	11	15	-----	-----	3,180 12	1,712 12	116 00	50
3	5	46	74	104	3	6	13,586 90	11,370 33	4,200 00	450
8	4	134	211	291	21	16	63,128 77	61,533 58	106,000 00	1,500
2	1	11	18	21	1	2	6,080 70	4,946 82	1,600 00	500
4	4	68	98	145	12	13	13,509 23	13,808 53	62,200 00	900
3	3	43	41	75	4	5	31,508 51	27,602 88	22,100 00	1,144
3	5	64	84	122	4	8	11,883 43	10,297 68	4,250 00	475
2	-----	12	17	21	-----	-----	3,542 40	2,679 05	150 00	60
8	6	155	221	317	22	24	25,792 44	25,597 88	106,700 00	1,700

COUNTY.

1	-----	10	10	14	1	-----	$2,490 15	$1,569 48	$2,650 00	653
1	1	9	17	20	1	1	3,147 74	1,848 10	925 00	308
3	1	37	45	72	14	7	6,404 83	4,895 41	15,840 00	550
1	2	19	14	26	4	1	5,102 27	2,987 04	375 00	294
1	3	13	30	33	2	4	5,861 58	3,579 49	1,356 00	592
1	-----	11	12	17	-----	-----	1,607 71	1,430 09	2,350 00	129
4	13	201	211	326	10	17	31,579 59	21,509 40	23,850 00	1,562
1	-----	13	14	17	4	1	2,071 53	1,699 60	4,050 00	653
1	1	9	17	21	-----	2	2,972 94	1,937 75	955 00	348
3	2	45	50	76	2	-----	8,503 30	7,379 95	30,600 00	601
1	2	18	23	33	1	4	5,800 93	3,756 07	270 00	291
1	3	14	23	32	1	1	5,878 26	4,326 70	700 00	100
1	-----	11	16	18	1	-----	1,330 38	1,084 86	2,350 00	127
4	13	225	243	350	22	25	175,436 08	23,536 42	23,850 00	152

STATISTICS OF HIGH

SAN FRANCISCO

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term Number of Days Taught.
1905.				
Commercial High	City	Chas. H. Murphey	E. P. Barrett	209
Commercial Evening	City	Geo. H. Foulks	E. P. Barrett	209
Girls'	City	A. W. Scott	E. P. Barrett	209
Humboldt Evening	City	L. A. Taaffe	E. P. Barrett	209
Lowell	City	Frank Morton	E. P. Barrett	209
Mission	City	Joseph O'Connor	E. P. Barrett	209
Polytechnic	City	Walter N. Bush	E. P. Barrett	209
1906.				
Commercial High	City	Chas. H. Murphey	E. P. Barrett	150
Commercial Evening	City	Geo. H. Foulks	E. P. Barrett	150
Girls'	City	A. W. Scott	E. P. Barrett	150
Humboldt Evening	City	L. A. Taaffe	E. P. Barrett	150
Lowell	City	Frank Morton	E. P. Barrett	150
Mission	City	Joseph O'Connor	E. P. Barrett	150
Polytechnic	City	Walter N. Bush	E. P. Barrett	150

SAN JOAQUIN

1905.				
Lodi	District	J. B. Wooten	C. M. Ferdner	189
Stockton	City	C. M. Ritter	James A. Barr	189
1906.				
Lodi	District	J. B. Wooten	C. M. Ferdner	187
Stockton	City	C. M. Ritter	James A. Barr	178

SAN LUIS OBISPO

1905.				
Arroyo Grande	Union	Lucia H. Fish	Mrs. Mary Clevenger	182
Paso Robles	District	E. E. Taylor	W. O. Dresser	187
San Luis Obispo	District	Roy E. Dickerson	Henry Loobliner	190
1906.				
Arroyo Grande	Union	H. G. Harwood	Mrs. Mary Clevenger	188
Paso Robles	District	E. E. Taylor	S. D. Merk	189
San Luis Obispo	District	J. A. Metzler	D. M. Meredith	187

SAN MATEO

1905.				
San Mateo	Union	F. G. Sanderson	C. N. Kirkbride	188
Sequoia, Redwood City	Union	F. S. Rosseter	L. P. Behrens	193
1906.				
San Mateo	Union	F. G. Sanderson	C. N. Kirkbride	184
Sequoia, Redwood City	Union	S. P. McCrea	J. T. O'Keefe	187

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
4	12	177	433	379	13	55	$18,982 83	$18,982 83	$200 00	237
5	9	120	70	306	32	23	9,978 32	9,978 32	------	------
6	13	------	685	511	------	81	38,802 20	38,802 20	195,500 00	2,355
18	3	868	72	472	44	4	23,223 19	23,223 19	1,050 00	200
20	2	483	375	640	30	24	48,029 26	48,029 26	72,250 00	850
5	10	164	273	317	15	24	28,391 74	28,391 74	200,450 00	680
10	5	261	118	245	29	16	28,684 82	28,684 82	106,000 00	1,000
3	12	200	525	477	15	67	20,220 00	20,220 00	250,096 00	12
5	10	457	292	315	------	------	10,070 00	10,070 00	10,000 00	------
6	13	------	762	559	------	77	34,736 31	34,736 31	195,600 00	2,384
22	4	1010	73	546	57	5	20,605 00	20,605 00	30,676 00	300
18	3	548	400	675	34	39	38,889 65	38,889 65	72,250 00	900
5	12	162	290	317	19	39	30,771 02	30,771 02	173,100 00	659
10	5	330	129	322	29	22	29,332 00	29,332 00	136,400 00	2,400

COUNTY.

1	2	33	46	60	4	8	$3,835 98	$3,679 58	$7,465 00	275
6	8	130	245	323	17	24	20,982 96	26,363 49	156,900 00	1,450
1	2	31	49	63	3	13	5,171 89	4,078 63	8,010 00	310
6	8	139	212	287	15	21	27,241 81	26,359 72	156,700 00	1,400

COUNTY.

------	3	20	43	47	2	5	$9,431 91	$4,014 92	$1,942 00	684
1	3	28	50	65	4	8	5,082 02	5,082 02	1,250 00	1,859
2	2	34	46	68	7	6	39,601 95	7,797 62	3,851 00	475
1	2	16	35	30	------	------	9,336 33	6,928 30	6,385 00	680
1	3	26	42	51	5	5	5,454 09	4,787 81	1,250 00	1,281
2	2	39	54	70	8	7	38,450 21	15,795 22	11,749 00	489

COUNTY.

2	3	25	31	45	1	5	$9,378 10	$6,338 79	$26,750 00	395
3	2	35	53	72	3	11	12,239 41	8,052 39	57,000 00	600
2	4	28	38	52	1	4	9,558 09	8,186 69	27,525 00	550
3	3	42	59	85	2	12	11,684 24	6,634 87	57,200 00	700

STATISTICS OF HIGH

SANTA BARBARA

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term (Number of Days Taught).
1905.				
Lompoc	Union	W. P. Campbell	Geo. F. Rucker	200
Santa Barbara	City	A. E. Monteith	A. A. Poole	200
Santa Maria	Union	E. L. Mitchell	Jos. Allott	200
Santa Ynez	Union	F. G. Goodenow	C. O. Gardner	200
1906.				
Lompoc	Union	W. P. Campbell	Geo. F. Rucker	200
Santa Barbara	City	A. E. Monteith	Clio L. Lloyd	200
Santa Maria	Union	E. L. Mitchell	Arch. McNeil	200
Santa Ynez	Union	F. G. Goodenow	C. O. Gardner	200

SANTA CLAR

1905.				
Campbell	Union	J. F. Smith	Geo. F. Duncan	20
Gilroy	District	E. E. Brownell	W. A. Whitehurst	20
Live Oak, Morgan Hill	Union	W. W. Pettit	H. S. Hersman	18
Los Gatos	District	W. W. Wilson	C. H. Wheeler	19
Mountain View	District	Herbert Lee	J. S. Mockbee	20
Palo Alto	District	Chas. C. Hill	Frank Cramer	18
San José	City	R. D. Hunt	Geo. S. Wells	20
Santa Clara	City	L. R. Smith	A. L. Kellogg	20
1906.				
Campbell	Union	J. Fred Smith	John F. Duncan	20
Gilroy	District	E. E. Brownell	W. A. Whitehurst	20
Live Oak, Morgan Hill	Union	Franklin L. Talbert	D. J. Fogarty	20
Los Gatos	District	Chas. I. Kerr	Geo. R. Lewis	20
Mountain View	District	Herbert Lee	J. S. Mockbee	20
Palo Alto	District	Chas. C. Hill	Frank Cramer	20
San José	City	Rockwell D. Hunt	Geo. S. Wells	20
Santa Clara	City	L. R. Smith	A. L. Kellogg	20

SANTA CRUZ

1905.				
Santa Cruz	District	David C. Clark	S. A. Palmer	200
Watsonville	District	Irving Townsend	J. J. Morey	200
1906.				
Boulder Creek	Union	Roy E. Dickerson	J. H. Aram	189
Santa Cruz	District	David C. Clark	S. A. Palmer	186
Watsonville	District	Irving Townsend	J. J. Morey	187

SHASTA

1905.				
Shasta County, Redding	County	U. G. Durfee	Kate A. Brincard	180
1906.				
Shasta County	County	B. Macomber	Kate A. Brincard	190

CHOOLS—Continued.

OUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance	Number of Graduates.		Financial.			No. of Volumes in Library
Men	Women	Boys	Girls		Boys	Girls	Receipts.	Expenditures.	Total Valuation of All Property.	
2	2	16	24	31	1	2	$8,572 18	$5,495 41	$12,075 00	300
5	5	89	117	166	8	15	26,450 84	16,008 98	103,300 00	500
2	4	32	58	74	4	9	8,722 02	7,496 05	15,000 00	1,000
1	2	14	23	26	------	2	5,559 68	4,637 54	7,550 00	1,500
2	2	22	28	40	2	5	9,009 70	5,283 73	12,275 00	300
5	5	111	141	201	5	7	25,773 85	21,155 20	144,200 00	1,450
2	4	32	67	87	4	12	16,598 94	13,841 81	21,100 00	1,500
1	2	14	21	27	2	4	5,240 34	4,105 79	3,425 00	1,620

OUNTY.

2	2	35	43	65	3	6	$5,679 96	$5,066 03	$12,050 00	480
1	3	22	53	63	1	8	6,372 34	5,597 36	21,000 00	200
1	1	7	13	17	------	------	1,938 09	1,218 86	18 00	19
1	3	38	54	79	2	7	5,256 20	3,550 98	6,600 00	350
1	3	17	25	33	------	1	5,240 02	3,883 98	10,775 00	417
3	4	92	91	143	7	10	30,462 50	21,066 52	23,200 00	565
9	12	343	475	633	37	57	20,845 80	29,075 79	160,350 00	2,537
2	4	73	97	142	19	14	60,706 41	8,238 18	5,200 00	1,050
2	2	44	53	80	6	7	$4,934 06	$4,499 68	$12,300 00	540
1	4	31	56	77	5	4	6,446 20	5,993 82	21,150 00	300
1	2	10	22	28	------	------	15,104 95	11,141 08	10,059 00	135
2	2	27	53	65	3	7	7,976 56	5,608 93	7,200 00	530
1	3	25	31	47	3	3	5,285 36	3,947 05	11,175 00	473
3	5	113	86	154	14	10	19,920 07	10,870 53	23,649 00	792
10	13	372	449	665	30	51	33,590 79	33,442 94	57,7[illegible]0 00	1,138
2	7	92	90	150	10	13	59,628 82	59,823 61	61,900 00	150

COUNTY.

2	7	112	157	227	9	22	$12,985 38	$12,308 77	$52,350 00	700
2	2	52	78	95	13	20	10,553 00	6,851 50	41,750 00	640
1	1	10	14	18	------	------	13,782 54	12,950 55	10,300 00	176
3	8	118	165	205	9	17	14,751 24	13,435 15	52,850 00	1,200
3	3	79	92	133	13	18	11,733 79	9,205 10	46,500 00	500

COUNTY.

4	2	38	58	72	13	17	$6,839 60	$6,230 09	$40,700 00	151
3	3	55	60	81	1	5	7,905 34	7,695 01	41,000 00	580

STATISTICS OF HIGH

SISKIYOU

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1905.				
Etna, Etna Mills	Union	Otto Luther	F. H. Tebbe	184
Siskiyou County, Yreka	County	Frederick Liddeke	Mrs. W. J. Balfrey	188
1906.				
Etna, Etna Mills	Union	Geo. A. Harkleroad	F. H. Tebbe	184
Siskiyou County, Yreka	County	Frederick Liddeke	Mrs. W. J. Balfrey	189

SOLANO

1905.				
Armijo, Fairfield	Union	H. F. Sheldon	J. A. S. Brown	200
Benicia	District	G. E. Furbush	A. Dalton, Sr.	199
Dixon	Union	T. A. Smith	R. J. Currey	200
Vacaville	Union	C. H. Nielsen	J. L. Kidd	198
Vallejo	District	J. J. Rippetoe	F. J. Walter	200
Winters	Jt. Union	T. S. MacQuiddy	W. H. Gregory	-----
1906.				
Armijo, Fairfield	Union	H. F. Sheldon	J. A. S. Brown	200
Benicia	District	G. E. Furbush	A. Dalton, Sr.	200
Dixon	Union	A. O. Taylor	R. J. Currey	200
Vacaville	Union	C. H. Nielsen	J. L. Kidd	195
Vallejo	District	T. J. Penfield	F. J. Walter	200
Winters	Jt. Union	J. R. Grinstead	F. W. Wilson	-----

SONOMA

1905.				
Cloverdale	Union	W. B. Netherton	Mrs. Mary J. Field	186
Healdsburg	District	H. R. Bull	H. G. Hewitt	188
Petaluma	City	J. B. Newell	W. H. Darden	190
Santa Rosa	District	E. M. Cox	F. G. Nagle	188
Sonoma Valley, Sonoma	Union	DeWitt Montgomery	Robert P. Hill	189
1906.				
Cloverdale	Union	W. B. Netherton	Mrs. Mary J. Field	187
Healdsburg	District	H. R. Bull	I. T. Coffman	182
Petaluma	City	J. B. Newell	A. B. Way	189
Santa Rosa	District	E. M. Cox	H. C. Cottrin	185
Sonoma Valley, Sonoma	Union	DeWitt Montgomery	Robert P. Hill	190

STANISLAUS

1905.				
Modesto	District	Thomas Downey	Robert Elder	191
Oakdale	Union	H. N. Caldwell	A. S. Emery	186
1906.				
Modesto	District	Thomas Downey	Robert Elder	193
Oakdale	Union	H. N. Caldwell	A. S. Emery	194

HOOLS—Continued.

UNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance	Number of Graduates.		Financial.			No. of Volumes in Library
...	Women	Boys	Girls		Boys	Girls	Receipts.	Expenditures.	Total Valuation of All Property.	
1	2	17	26	34	1	1	$3,453 91	$3,433 32	$5,300 00	731
2	3	29	22	41	1	4	11,359 15	10,863 48	25,200 00	1,040
1	2	15	27	36	1	9	4,408 86	3,532 48	5,300 00	740
2	3	26	37	48	3	.....	12,144 64	7,599 52	25,200 00	1,243

UNTY.

1	3	37	56	74	.....	2	$8,827 04	$7,015 17	$12,900 00	600
2	2	12	26	34	6	5	4,934 57	4,450 48	1,125 00	312
1	2	18	27	40	1	4	5,499 19	3,935 17	6,750 00	400
2	3	36	66	82	9	7	8,615 68	7,897 52	23,500 00	1,050
1	3	38	74	86	5	9	8,945 12	5,468 18	2,285 00	843
...	.....	5	5	8	.....	.....	1,248 18	520 50	.....	.....
2	3	47	48	75	2	2	13,507 32	8,178 04	13,200 00	1,025
1	2	12	27	33	1	2	5,296 23	3,979 95	1,005 00	332
1	2	22	34	49	5	7	6,152 57	4,389 81	8,769 00	723
2	3	30	60	72	5	14	8,757 77	7,050 63	23,800 00	1,100
1	4	38	70	86	.....	7	9,968 42	6,767 00	2,417 00	963
...	.....	3	10	11	.....	.....	1,880 17	1,030 95	.....	.....

UNTY.

1	2	9	19	22	.....	2	$3,935 77	$2,190 06	$1,025 00	391
3	.....	35	44	60	5	8	5,573 22	3,184 15	1,000 00	400
3	3	61	93	128	2	13	10,762 58	7,364 42	20,525 00	688
3	6	139	187	243	14	22	31,095 96	20,469 59	27,500 00	1,300
2	1	16	22	31	.....	.....	6,281 95	4,483 65	11,440 00	1,084
1	2	9	21	23	.....	2	4,572 67	2,624 79	1,025 00	650
3	1	45	55	77	4	7	6,172 94	5,205 34	1,000 00	500
3	3	55	98	117	5	12	11,619 02	8,210 53	20,525 00	700
3	6	123	205	246	13	25	27,064 37	12,280 62	27,500 00	1,192
2	2	15	20	27	2	3	5,956 24	5,049 11	11,440 00	1,250

UNTY.

2	2	37	53	80	4	8	$9,017 86	$6,784 23	$28,450 00	1,283
2	1	21	21	37	2	.....	8,868 30	4,940 20	1,245 00	210
2	2	42	61	89	3	5	9,690 84	6,807 40	28,600 00	1,388
2	1	18	23	33	3	4	7,584 34	4,878 06	1,977 00	464

STATISTICS OF HIGH

SUTTER

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1905.				
Sutter City	Union	W. H. Weslar	W. M. Wadsworth	196
1906.				
Sutter City	Union	W. H. Weslar	C. E. Moore	193

TEHAMA

1905.				
Corning	Union	O. E. Graves	W. H. Sampson	192
Orland	Jt Union	L. M. Reager	T. J. Hicks	180
Red Bluff	Union	Glenn L. Allen	W. P. Johnson	
1906.				
Corning	Union	O. E. Graves	W. H. Sampson	182
Orland	Jt Union	L. M. Reager	G. H. Hicks	
Red Bluff	Union	Glenn L. Allen	W. P. Johnson	181

TULARE

1905.				
Dinuba	Union	J. R. O'Hanlon	G. W. Wyllie	18[illegible]80
Porterville	District	M. E. DeWitte	Jos. Carter	18[illegible]8[illegible]
Reedley	Jt Union	A. O. Taylor	W. H. Carpenter	[illegible]18
Tulare	District	W. E. Premo	Jno. A. Goble	18[illegible]8
Visalia	City	Geo. R. Kleeberger	H. B. McClure	18
1906.				
Dinuba	Union	F. E. Howard	S. K. Greene	180
Kingsburg	Jt Union		P. F. Adelsbach	Se
Porterville	District	M. E. DeWitte	Joseph Carter	180
Reedley	Jt Union	Miss M. K. Carrier	W. H. Carpenter	Se
Tulare	District	S. A. Crookshanks	F. M. Eldridge	180
Visalia	City	F. A. Swanger	H. B. McClure	180

TUOLUMNE

1905.				
Tuolumne County, Sonora	County	T. J. Penfield	G. P. Morgan	184
1906.				
Tuolumne County, Sonora	County	J. E. Coover	G. P. Morgan	183

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
1	2	20	22	39	2	3	$5,058 24	$4,309 06	$8,285 00	650
1	2	21	22	40	4	6	4,104 07	3,999 15	8,980 00	700

COUNTY.

1	3	26	35	52	------	------	$9,615 12	$7,861 26	$1,836 00	289
							35 26	16 90		
2	4	43	56	90	8	5	8,415 10	7,596 41	2,386 00	509
1	4	27	46	55	------	3	8,772 10	6,879 54	2,490 00	400
							82 19	37 55		
3	3	48	63	89	5	16	7,415 84	7,370 23	4,610 00	607

COUNTY.

1	2	47	39	64	4	3	$4,407 49	$3,974 24	$10,450 00	250
1	3	36	41	66	------	4	30,958 44	13,961 45	11,300 00	522
			6	4			740 42	632 69	1,282 00	166
4	2	56	86	121	9	12	7,162 15	7,111 85	2,050 00	167
2	4	66	87	133	2	15	9,209 56	8,957 48	22,200 00	976
1	3	30	36	56	2	4	4,703 27	4,623 51	13,225 00	406
Fresno.		2	2	2	------	------	603 67	522 20		
1	3	37	44	68	6	1	21,323 42	21,142 24	25,950 00	735
Fresno.		------	6	6	------	------	2,869 02	2,090 30		
2	4	67	104	138	6	11	8,157 26	8,099 61	2,175 00	170
2	5	81	104	151	11	21	10,564 72	9,668 36	22,315 00	676

COUNTY.

1	2	14	38	44	------	------	$7,234 39	$5,102 98	$2,897 00	682
2	2	25	34	52	1	10	6,493 77	5,923 76	9,000 00	831

STATISTICS OF HIGH

VENTURA

Name, Location, and Post Office of School.	Kind of School.	Principal of School.	Clerk of High School Board.	Length of Term—Number of Days Taught.
1905.				
Oxnard	Union	J. S. Denton	H. W. Witman	200
Santa Paula	Union	G. S. Trowbridge	J. R. McKee	200
Ventura	Union	A. D. Tenney	B. W. Dudley	200
1906.				
Oxnard	Union	J. S. Denton	H. W. Witman	200
Santa Paula	Union	G. S. Trowbridge	T. A. Slocum	200
Ventura	Union	A. D. Tenney	B. W. Dudley	200

YOLO

1905.				
Esparto	Union	G. P. Needham	J. C. Winter	200
Pierce, College City	Jt Union	D. W. Lindsay	J. E. Cain	
Winters	Jt Union	T. S. MacQuiddy	W. H. Gregory	190
Woodland	City	Wm. Hyman	Wm. Hyman	200
1906.				
Esparto	Union	Guy P. Needham	C. H. Curtis	200
Pierce, College City	Jt Union	D. W. Lindsay	J. E. Cain	
Winters	Jt Union	J. R. Grinstead	W. H. Gregory	195
Woodland	City	Wm. Hyman	Wm. Hyman	200

YUBA

1905.				
Marysville	City	A. B. Martin	J. A. Scott	184
1906.				
Marysville	City	A. B. Martin	J. A. Scott	195

TOTALS—1905.

Average length of term		189 days.
Number of teachers employed	Men,	407
	Women,	590
Pupils enrolled	Boys,	10,525
	Girls,	13,728
Average daily attendance		19,016
Number of graduates	Boys,	1,007
	Girls,	1,584
Financial—Receipts		$2,373,108 27
Expenditures		$1,785,877 85
Total valuation of all property		$4,049,525 00
Number of volumes in library		112,739

For totals in detail, see "Summary of Statistics," page 256.

SCHOOLS—Continued.

COUNTY.

Teachers Employed.		Pupils Enrolled.		Average Daily Attendance.	Number of Graduates.		Financial.			No. of Volumes in Library.
Men.	Women.	Boys.	Girls.		Boys.	Girls.	Receipts.	Expenditures.	Total Valuation of All Property.	
2	2	31	39	49		6	$9,029 33	$7,510 76	$25,170 00	472
3	2	52	57	89	1	8	15,490 76	7,638 37	30,500 00	1,400
5	3	53	89	112	4	12	20,342 90	10,791 59	12,600 00	1,516
1	3	33	36	55		10	10,181 70	6,199 71	25,568 80	576
3	3	74	64	114	8	8	17,901 30	13,338 68	31,500 00	1,500
4	3	40	78	102	3	10	19,714 41	9,673 03	21,500 00	1,545

COUNTY.

1	1	15	7	18	3		$3,306 10	$2,152 29	$6,375 00	625
							855 70	835 00		
1	2	10	13	19			2,809 76	2,480 36	61,200 00	314
1	3	53	56	98	9	10	10,211 90	8,066 13	20,600 00	550
1	2	19	15	28			4,638 25	3,599 04	6,375 00	700
		3	1	3			604 46	602 50		
1	2	17	19	32		4	3,464 43	2,515 93	500 00	200
1	4	62	62	102	10	8	10,947 60	9,464 38	22,050 00	800

COUNTY.

1	3	50	68	101	3	3	$6,312 79	$6,216 30	$11,450 00	850
1	3	35	66	84	8	6	5,954 05	5,701 85	10,850 00	850

TOTALS—1906.

Average length of term		187 days.
Number of teachers employed	Men,	445
	Women,	692
Pupils enrolled	Boys,	12,374
	Girls,	15,701
Average daily attendance		21,397
Number of graduates	Boys,	1,078
	Girls,	1,735
Financial—Receipts		$3,165,230 55
Expenditures		$2,118,849 15
Total valuation of all property		$5,093,014 00
Number of volumes in library		126,436

For totals in detail, see "Summary of Statistics," page 256.

WOODLAND HIGH SCHOOL--YOLO COUNTY.

STATISTICS

OF

CITY SCHOOLS.

Reported by City Superintendents and Supervising Principals, the names of such officers being furnished by County Superintendents.

ASSEMBLY HALL, HIGH SCHOOL—ALAMEDA CITY.

STATISTICS OF CITY SCHOOLS.

TABLE No. 18—SPECIAL REPORTS FROM CITIES FOR THE SCHOOL YEARS CLOSING JUNE 30, 1905 AND 1906.

Population, Census of 1900—School Census, 1905 and 1906.

Cities.	Population, Census of 1900.	School Census.			
		1905.		1906.	
		Boys.	Girls.	Boys.	Girls.
Alameda	16,464	2,062	2,120	2,147	2,244
Bakersfield	4,836	637	648	653	635
Berkeley	13,214	2,548	2,292	2,763	2,568
Chico	2,640	821	858	910	972
Eureka	7,327	1,218	1,151	1,278	1,233
Fresno	12,470	2,054	2,111	2,260	2,241
Grass Valley	4,719	638	637	679	686
Los Angeles	102,499	19,750	19,894	22,191	21,952
Marysville	3,497	355	439	409	454
Nevada City	3,250	404	351	352	334
Oakland	66,960	8,528	8,788	9,753	10,067
Pasadena	9,117	2,213	2,336	2,476	2,670
Pomona	5,526	844	795	823	847
Riverside	7,973	1,108	1,098	1,118	1,129
Sacramento	29,282	3,032	3,024	3,120	3,097
Salinas City	3,304	396	407	382	419
San Bernardino	6,150	1,219	1,145	1,254	1,123
San Diego	17,700	2,028	1,963	2,318	2,161
San José	21,500	2,688	2,658	2,941	3,019
Santa Ana	4,933	815	841	827	843
Santa Barbara	6,750	1,087	1,116	1,156	1,247
Santa Cruz	5,659	1,063	1,272	1,131	1,291
Santa Monica	3,032	955	902	1,136	1,139
Santa Rosa	6,800	952	1,032	896	1,027
Stockton	17,506	1,700	1,855	1,840	1,830
Vallejo*	7,965	882	810	.....	.....
Visalia*	.....	568	576	.....	.....
Woodland	.....	493	517	485	479

* No report for 1906.

TABLE No. 18—SPECIAL REPORTS FROM CITIES FOR THE SCHOOL YEARS CLOSING JUNE 30, 1905 AND 1906—Continued.

Teachers Employed in Kindergartens, Primary, Grammar, and High Schools.

Cities.	Kindergartens.		Primary Schools.				Grammar Schools.				High Schools.			
	1905.	1906.	1905.		1906.		1905.		1906.		1905.		1906.	
	Women.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Alameda				47		48	7	29	6	30	5	9	6	9
Bakersfield				12		13	4	6	3	5				
Berkeley				48		51	5	39	7	41	10	13	9	17
Chico			1	13		17	3	5	4	5	2	3	4	7
Eureka				22		21	3	8	4	8	3	4	3	4
Fresno	1	1	8	62	10	65	4	11	4	12	5	7	7	7
Grass Valley			1	8	1	9	2	7	2	7	2	3	2	3
Los Angeles	86	86		309	2	344	36	291	42	304	23	42	32	55
Marysville				4		4	1	3	1	4	1	3	1	3
Nevada City				7		7	3	2	3	2	2	2	2	2
Oakland	2	2		133		142	9	89	17	97	18	25	17	28
Pasadena	14	17		46		40	5	22	8	37	6	14	5	18
Pomona	6	6		14		15	1	14	1	15	3	8	2	7
Riverside	2	3		22		25	1	11		11	5	5	5	6
Sacramento	16	16	1	79		85	6	37	3	36	3	11	4	11
Salinas City				10		10	1	4	1	4	3	2	3	2
San Bernardino				29		37	2	19	1	10	3	5	4	4
San Diego	6	6	2	42		39	4	25	6	32	4	13	1	16
San José			1	46		42	10	42	6	45	9	12	10	13
Santa Ana	2	2		16		16	5	13	5	17	6	8	7	8
Santa Barbara	7	7		22		25	4	11	4	15	5	5	5	7
Santa Cruz	2	2		21		18	3	8	3	11	3	8	3	8
Santa Monica				14		16		8	1	8	2	4	2	6
Santa Rosa				21		23	2	6	2	6	3	6	3	6
Stockton				33		29	5	23	6	31	6	8	6	8
Vallejo*				15			1	14			1	3		
Visalia*				9			1	6			2	4		
Woodland	1	1		9		8	1	5	1	6	1	3	1	4

* No report for 1906.

Enrollment in Kindergartens, Primary, Grammar, and High Schools.

Cities.	Kindergartens.				Primary Schools.				Grammar Schools.				High Schools.			
	1905.		1906.		1905.		1906.		1905.		1906.		1905.		1906.	
	Boys.	Girls.	Boys.	Girls	Boys.	Girls	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Alameda					1139	1074	1118	1012	416	455	425	490	207	288	179	297
Bakersfield					354	309	408	315	140	164	123	139				
Berkeley					1051	950	1126	970	782	875	863	876	357	427	454	511
Chico					440	410	464	425	130	170	184	188	79	70	88	95
Eureka					653	571	650	577	282	270	261	294	79	134	106	141
Fresno	40	34	68	55	1437	1332	1619	1531	197	271	241	323	170	235	149	199
Grass Valley					247	175	295	231	193	210	194	182	41	55	42	49
Los Angeles	1614	1545	1241	1379	9121	8326	9989	9274	4802	5290	5486	5863	951	1216	1246	1586
Marysville					120	112	115	96	88	88	104	92	50	68	38	67
Nevada City					209	204	189	182	95	65	90	78	31	53	28	52
Oakland	72	71	69	75	3931	3649	4338	4215	1717	1936	1899	2166	618	944	624	935
Pasadena	185	225	236	248	903	875	996	959	582	673	674	797	215	339	253	392
Pomona	95	98	122	100	383	316	484	458	283	270	181	212	96	105	109	137
Riverside	18	44	31	39	555	511	513	500	232	238	266	261	179	176	180	200
Sacramento	206	212	212	208	1895	1520	1811	1455	670	758	709	819	187	259	198	267
Salinas City					223	189	204	193	114	121	107	107	53	66	44	77
San Bernardino					657	599	733	645	233	227	241	254	65	111	68	96
San Diego	201	171	225	220	1011	926	1059	980	434	471	720	700	201	211	231	246
San José					1278	1066	1155	738	790	728	1010	792	343	475	372	449
Santa Ana	64	74	68	62	370	348	365	354	304	295	344	330	168	238	153	232
Santa Barbara	112	92	115	114	484	461	559	543	90	162	238	283	89	117	111	141
Santa Cruz	31	28	43	38	440	498	507	498	230	218	190	213	112	157	118	165
Santa Monica					384	339	415	394	179	169	217	231	37	72	54	78
Santa Rosa					617	642	582	606	193	216	167	179	139	187	125	206
Stockton					873	829	876	773	454	548	534	585	130	245	139	212
Vallejo*					415	336			242	262			38	74		
Visalia*					234	210			125	125			66	87		
Woodland	13	17	25	27	253	249	214	194	109	140	122	177	53	56	62	62

*No report for 1906

TABLE No. 18—SPECIAL REPORTS FROM CITIES FOR THE SCHOOL YEARS CLOSING JUNE 30, 1905 and 1906—Continued.

Average Number of Census Children and Average Number of Pupils Enrolled Per Teacher Employed in Primary and Grammar and High Schools.

Cities.	Pe Teacher Employed, Average Number of					
	Census Children.		Pupils Enrolled in Primary and Grammar Schools.		Pupils Enrolled in High Schools.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	50	52	37	36	35	31
Bakersfield	67	67	51	52	----------	----------
Berkeley	54	54	45	39	36	37
Chico	76	$72\frac{4}{10}$	52	49	30	26
Eureka	72	76	54	54	30	35
Fresno	48	52	44	44	37	29
Grass Valley	71	72	46	46	18	18
Los Angeles	63	64	43	44	33	33
Marysville	99	96	51	45	29	26
Nevada City	63	57	48	45	21	20
Oakland	77	$76\frac{8}{10}$	50	$49\frac{2}{10}$	36	$34\frac{6}{10}$
Pasadena	62	61	41	40	37	28
Pomona	57	54	43	43	20	27
Riverside	67	$60\frac{7}{10}$	47	$45\frac{3}{10}$	36	$34\frac{5}{10}$
Sacramento	45	50	38	38	32	33
Salinas City	54	53	43	41	24	24
San Bernardino	59	49	43	40	22	21
San Diego	55	57	39	45	24	28
San José	54	70	39	44	39	36
Santa Ana	49	44	39	37	29	26
Santa Barbara	64	61	35	42	22	25
Santa Cruz	68	75	43	44	27	26
Santa Monica	84	91	49	56	18	16
Santa Rosa	69	62	57	52	36	37
Stockton	58	56	44	42	27	25
Vallejo*	55	----------	44	----------	28	----------
Visalia*	71	----------	43	----------	25	----------
Woodland	70	65	50	47	27	25

Average Cost Per Annum Per Pupil Enrolled—Number of Years or Grades in Courses of Study.

Cities.	Average Cost Per Annum Per Pupil Enrolled in						Course of Study, Number of Years or Grades in				Total No. of Years or Grades in Course.
	Kindergartens.		Primary and Grammar Schools.		High Schools.		Kindergartens.	Primary Schools.	Grammar Schools.	High Schools.	
	1905.	1906.	1905.	1906.	1905.	1906.					
Alameda			$27 74	$26 60	$37 15	$39 05		5	3	4	12
Bakersfield			23 15	17 23				4	4		8
Berkeley			27 75	23 88	43 90	42 00		4	4	4	12
Chico			15 63	17 59	54 79	51 16		5	3	4	12
Eureka			18 70	19 24	47 89	42 10		5	3	4	12
Fresno	$12 00		22 00	34 28	50 90	62 74	1	6	2	4	13
Grass Valley			22 76	21 30	45 96	50 90		4	4	4	12
Los Angeles	17 03	$19 70	23 32	22 22	58 08	46 80	1½	4	4	4	13½
Marysville			23 03	24 66	52 68	54 30		4	4	4	12
Nevada City			19 00	19 00	54 00	55 00		5	3	4	12
Oakland	25 08	13 81	25 08	23 86	41 80	45 38	1	4	4	4	13
Pasadena	20 17	20 06	21 90	20 45	49 00	39 70	1	4	4	4	13
Pomona	13 65	10 38	25 77	20 69	63 62	46 19	1½	4	4	4	13½
Riverside	17 74	16 21	21 68	23 52	38 11	39 17	2	5	3	4	14
Sacramento	35 80	29 00	35 15	28 37	54 00	49 50	2	5	4	4	15
Salinas City			20 97	21 79	50 62	50 00		5	3	4	12
San Bernardino			20 18	19 00	64 45	66 00		5	4	4	13
San Diego	11 82	10 57	23 06	23 14	41 92	47 92	1	5	3	4	13
San José			32 47	34 25	44 33	50 85		4	4	4	12
Santa Ana	22 35	10 16	22 35	21 45	40 07	51 60	2	4	4	4	14
Santa Barbara	21 18	20 00	23 35	25 00	80 00	85 00	2	4	4	4	14
Santa Cruz	34 00	16 50	18 74	20 00	45 00	47 40	1	5	3	4	13
Santa Monica			18 35	19 43	69 63	73 04		4	4	4	12
Santa Rosa			16 77	18 49	42 51	37 10		5	3	4	12
Stockton			28 17	28 85	70 30	59 77		4	4	4	12
Vallejo*			21 31		48 21			4	4	4	12
Visalia*			14 12		60 19			5	3	4	12
Woodland	19 50	12 00	17 33	18 42	55 00		1	5	3½	4	13½

* No report for 1906.

TABLE No. 18—SPECIAL REPORTS FROM CITIES FOR THE SCHOOL YEARS CLOSING JUNE 30, 1905 AND 1906—Continued.

Length of School Term—Number of Pupils Graduated from Grammar and High Schools.

Cities.	Number of Months School was Maintained.		Number of Pupils Graduated from Grammar Schools.				Number of Pupils Graduated from High Schools.			
			1905.		1906.		1905.		1906.	
	1905.	1906.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Alameda	10	10	67	79	61	62	20	31	23	32
Bakersfield	9	9	21	29	14	15				
Berkeley	10	10	86	92	130	161	41	39	41	65
Chico	10	10	21	28	30	31	2	4	12	18
Eureka	10	10	56	49	36	66	6	18	10	21
Fresno	9½	9½	46	58	65	102	8	30	18	29
Grass Valley	10	10	13	21	13	20	4	6	3	6
Los Angeles	10	10	408	638	610	783	74	78	81	136
Marysville	10	10	9	10	15	10	3	3	8	6
Nevada City	10	10	8	7	16	11	7	4	3	11
Oakland	10½	10½	161	244	244	226	63	119	51	90
Pasadena	9	9	59	96	77	114	13	31	29	32
Pomona	9½	9	27	26	27	42	8	14	9	14
Riverside	9	9	41	46	47	54	16	16	24	25
Sacramento	10	10	66	114	57	103	13	20	19	39
Salinas City	10	10	19	24	19	21	6	14	4	5
San Bernardino	9	9	13	25	36	31	9	15	12	13
San Diego	9	10	57	88	88	106	10	17	22	25
San José	10	10	90	137	95	153	37	57	30	51
Santa Ana	9½	9½	40	45	45	61	14	43	20	29
Santa Barbara	10	10	36	38	30	47	8	15	6	6
Santa Cruz	10	10	36	61	48	50	10	20	9	17
Santa Monica	9½	9½	17	17	17	23	1	9	2	9
Santa Rosa	10	10	28	44	24	37	12	24	13	25
Stockton	10	10	41	64	73	79	17	24	15	21
Vallejo*	10		19	31			5	9		
Visalia*	9						2	15		
Woodland	9	9	25	23	22	34	9	10	10	8

TABLE No. 18—SPECIAL REPORTS FROM CITIES FOR THE SCHOOL YEARS CLOSING JUNE 30, 1905 AND 1906.

Assessed Valuation of All City Property, and Tax Rates for Kindergartens, Primary and Grammar, and High Schools.

Cities.	Assessed Valuation of All City Property.		Rate of City Tax for Kindergarten Schools.		Primary and Grammar Schools.		High Schools.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	$12,527,012	$12,877,557	.....	.....	.14	.13½	.12	.12½
Bakersfield	3,065,882	2,829,537	.....	.....	.15	.15	.....	.....
Berkeley	14,012,765	16,314,829	.....	.....	.09	.17	.16	.08
Chico	3,322,415	3,617,898	.....	.....	.....	.05	.28	.27
Eureka	5,907,950	6,352,464	.....	.....	.....	.....	.15	.13
Fresno	8,678,767	9,810,448	.....	.....	.20	.48	.30	.15
Grass Valley	1,607,000	1,607,000	.....	.....	.....	.....	.20	.20
Los Angeles	125,716,668	156,266,509	.043+	.....	.027+	† .15+	.086+	.....
Marysville	2,153,228	2,101,047	.....	.....	.....	.....	.20	.21
Nevada City	1,250,000	1,200,000	.....	.....	.....	.....	.28	.28
Oakland	51,700,000	56,012,053	.....	.....	.048	.04⅘	.11	.11
Pasadena	15,997,195	20,012,999	.05	.05	.....	.02½	.14	.10
Pomona	3,067,057	3,300,000	.07	.07	.....	.....	.28	.36
Riverside	4,290,173	4,440,499	.....	.....	.14	.21	.22	.11
Sacramento	20,364,446	20,016,915	.....	.05	.36	.29	.08	.10
Salinas City	1,657,883	1,680,162	.....	.....	.....	.....	.25	.25
San Bernardino	2,793,300	4,044,498	.....	.....	.08	.20	.22	.23
San Diego	12,743,160	12,053,910	.....	.....	.17	.39	.20	.16
San José	16,297,365	16,580,540	.....	.....	.08	.11½	.135	.10
Santa Ana	2,952,502	3,000,000	.....	.....	.19	.16	.39	.44
Santa Barbara	6,729,559	6,345,123	.09	.08½	.09	.08½	.315	.22
Santa Cruz	4,250,000	3,696,195	.....	.....	.....	.....	‡ .25	‡ .25
Santa Monica	4,684,661	4,738,628	.....	.....	.03	.....	.15	.16
Santa Rosa	4,664,836	4,974,306	.....	.....	.....	.....	.23	‡ .25
Stockton	14,941,757	15,443,899	.....	.....	.17	.16	.115	.15
Vallejo *	2,646,231	.....	.....	.....	.10	.....	.19	.....
Visalia *	1,515,324	.....	.....	.....	.20	.....	.47	.....
Woodland	3,000,000	2,663,255	.....	.07	.03	.....	.23	.25

* No report for 1906. † General city tax. ‡ All school purposes.

TABLE No. 18—SPECIAL REPORTS FROM CITIES FOR THE SCHOOL YEAR CLOSING JUNE 30, 1905 AND 1906—Continued.

Amount of Money Raised by Taxation for School Purposes.

Cities.	For Kindergartens.		For Primary and Grammar Schools.		For High Schools.		Total.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda			$17,286 03	$17,213 25	$14,979 95	$15,913 83	$32,265 98	$33,127 08
Bakersfield			4,500 00	4,244 30			4,500 00	4,244 30
Berkeley			14,608 04	27,735 20	24,706 02	13,051 87	39,314 06	40,787 07
Chico				1,763 69	9,430 30	9,895 63	9,430 30	11,659 32
Eureka					8,012 72	8,152 10	8,012 72	8,152 10
Fresno			19,854 00	40,328 46	31,519 00	12,949 75	51,373 00	53,278 21
Grass Valley					3,088 00	3,097 82	3,088 00	3,097 82
Los Angeles	$53,797 83		34,580 06	† 248,133 86	107,827 91		196,205 80	248,133 86
Marysville					4,260 89	4,172 27	4,260 89	4,172 27
Nevada City					3,338 68	3,250 00	3,338 68	3,250 00
Oakland		$1,989 00	25,579 00	17,236 78	57,975 00	62,658 22	83,554 00	81,884 00
Pasadena	8,166 22	10,400 00		5,000 00	22,864 77	24,371 32	31,030 99	39,771 32
Pomona	2,146 93	2,330 19			8,587 75	11,331 66	10,734 68	13,661 85
Riverside			5,970 00	9,119 81	9,382 00	4,776 57	15,352 00	13,896 48
Sacramento		10,000 00	73,312 00	136,000 00	15,680 00	20,000 00	88,992 00	166,000 00
Salinas City					4,237 15	4,292 97	4,237 15	4,292 97
San Bernardino			3,259 18	8,572 09	8,882 49	10,071 86	12,141 67	18,643 95
San Diego		4,706 58	9,854 00	41,994 30	25,677 00	19,458 59	45,531 00	66,159 47
San José			13,408 32	19,233 12	22,198 71	16,588 34	35,607 03	35,821 46
Santa Ana			5,542 32	4,800 00	11,406 79	13,200 00	16,949 11	18,000 00
Santa Barbara	5,350 00	5,000 00	5,350 00	5,000 00	22,851 14	12,000 00	33,551 14	22,250 00
Santa Cruz					10,369 00	11,076 60	10,369 00	11,077 60
Santa Monica			1,475 82		6,929 93	7,085 30	8,405 75	7,085 30
Santa Rosa					11,203 70	11,833 19	11,203 70	11,833 19
Stockton			25,403 85	24,689 85	17,184 66	23,146 54	42,588 51	47,836 39
Vallejo*			2,501 35		5,027 84		7,529 19	
Visalia*			3,030 65		7,122 02		10,152 67	
Woodland		325 00			6,900 00	7,400 00	6,900 00	7,725 00

* No report for 1906. † General School Fund.

STATISTICS

OF

PUBLIC KINDERGARTENS

SCHOOL—ALAMEDA.

TABLE No. 19.

STATISTICS OF KINDERGARTENS.

Teachers—Number Employed—Sex—Certificates.

Counties.	Number of Regular and Special Teachers, including Principals.		Sex of Teachers.		Teachers' Certificates.			
			Women.		Kindergarten Primary.		Special for Kindergarten Work.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
neda	2	2	2	2	1	.....	1	2
no	1	1	1	1	.....	.....	1	1
Angeles	106	109	106	109	48	64	58	45
ge	2	2	2	2	1	2	1	.....
rside	2	2	2	2	.....	.....	2	2
amento	16	16	16	16	10	16	6	.....
Bernardino	.....	2	.....	2	.....	2	.....	.....
Diego	7	6	7	6	6	2	1	4
Francisco	.....	1	.....	1	.....	.....	.....	1
a Barbara	6	7	6	7	5	7	1	.....
a Cruz	2	2	2	2	2	2	.....	.....
ama	.....	1	.....	1	.....	1	.....	.....
)	1	1	1	1	1	1	.....	.....
tals	145	152	145	152	74	97	71	55

Pupils Enrolled—Attendance, Etc.

ounties.	Enrollment.						Attendance.					
	1905.		1906.		Total.		Average Number Belonging to Kind'garten Classes.		Average Daily Attendance in Kind'garten Classes.		Percentage of Attendance on Average Number Belonging.	
	Boys.	Girls.	Boys.	Girls.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
meda	72	71	69	75	143	144	61	60	57	56	94	94
no	40	34	68	55	74	123	44	44	43	41	97	93
Angeles	1,894	1,863	1,599	1,727	3,757	3,326	1,976	2,071	1,793	1,855	90	90
ge	64	74	68	62	138	130	63	71	59	56	93	92
erside	18	44	31	39	62	70	42	52	40	51	95	98
amento	208	212	212	208	418	420	282	219	262	200	93	91
ernard'o	.....	.....	13	13	.....	26	.....	25	.....	23	.....	90
Diego	234	191	216	203	425	419	219	181	203	169	91	93
Francis'o	.....	.....	21	28	.....	49	.....	42	.....	31	.....	74
ta Barb'a	99	76	115	114	175	229	114	116	101	101	89	87
ta Cruz	31	28	43	38	59	81	23	36	22	35	96	97
ama	.....	.....	22	22	.....	44	.....	24	.....	23	.....	91
o	17	41	25	27	58	52	24	27	22	24	89	89
tals	2,675	2,634	2,502	2,611	5,309	5,113	2,848	2,968	2,602	2,665	91	89

TABLE No. 19—STATISTICS OF KINDERGARTENS—Continued.

Length of Term—Monthly Salary—Visits, Etc.

Counties.	Number of Days School was Maintained during the Year.		Number of Months the Teachers in Charge at Close of Year have Taught in this Kindergarten.		Average Monthly Salary of Teachers.		School Visits. By County Superintendent.		By School Trustees.		By Other Persons.	
	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	192	211	31	36	$91 20	$91 20	2	4	26	3	87	68
Fresno	190	195	48	10	75 00	70 00	1				24	36
Los Angeles	185	182	43	49	56 49	56 76	808	258	29	14	5,368	5,707
Orange	185	185	32	27	70 00	72 50	1	2	1	2	184	142
Riverside	180	160	41	89	55 00	52 50		1	7	12	220	337
Sacramento	186	189	46	56	58 44	58 44	50	45	18	15	390	350
San Bernar'o		112		12		52 50		2		4		59
San Diego	174	189	55	85	73 57	75 00	4	2	43	24	557	490
San Francis'o		150		82		90 00		11		10		49
Santa Barb'a	200	200	22	145	62 50	61 10		2	10	11	135	58
Santa Cruz	200	200	104	250	62 50	62 50	2	2	2	2	60	50
Tehama		153		8		75 00		1		2		48
Yolo	180	180	57	8	65 00	65 00	1	1		1	35	75
Totals	*187	*177	*48	*66	*$66 97	*$67 88	869	331	136	100	7,141	7,519

*Average.

Teachers Attending Institute and Number of Books in Library.

Counties.	Number of Teachers Who Attended County or City Institute.		Number of Volumes Remaining in Kindergarten Library at the Close of the School Year.	
	1905.	1906	1905.	1906.
Alameda	2	2		
Fresno	1		53	91
Los Angeles	97	103		3,724
Orange	2	2	5	
Riverside	2	2	85	85
Sacramento	16	8		
San Bernardino		2		
San Diego	7	6		
San Francisco		1	135	124
Santa Barbara	5	7		
Santa Cruz	2	2		
Yolo	1	1		
Totals	135	136	278	4,024

TABLE No. 19—STATISTICS OF KINDERGARTENS—Continued.

Receipts from all Sources for School Years Closing June 30, 1905 and 1906.

Counties.	School Year Closing June 30, 1905.			
	Balance on Hand at Beginning of School Year.	Receipts from Taxes of all Kinds.	Donations, etc.	Total Receipts from all Sources.
Alameda		$2,089 00		$2,089 00
Fresno		827 50		827 50
Los Angeles	$1,760 03	64,125 98		65,886 01
Orange		1,395 00		1,395 00
Riverside		1,200 00		1,200 00
Sacramento		10,107 00		10,107 00
San Diego		5,070 00		5,070 00
San Francisco				
Santa Barbara	2,129 25	5,345 00		7,474 25
Santa Cruz		1,500 00		1,500 00
Yolo		650 00		650 00
Totals	$3,889 28	$92,309 48		$96,198 76

Counties.	School Year Closing June 30, 1906.			
	Balance on Hand at Beginning of School Year.	Receipts from Taxes of all Kinds	Donations, etc.	Total Receipts from all Sources.
Alameda		$1,991 75		$1,991 75
Fresno	*	*	*	*
Los Angeles	$1,453 94	64,355 66		65,809 60
Orange		1,452 50		1,452 50
Riverside		2,808 00		2,808 00
Sacramento		10,100 00		10,100 00
San Bernardino		650 00		650 00
San Diego		4,706 58		4,706 58
San Francisco		1,000 00		1,000 00
Santa Barbara	1,948 58	5,373 00		7,321 58
Santa Cruz	*	*	*	*
Tehama		976 40		976 40
Yolo	314 41	1,517 99		1,832 40
Totals	$3,716 93	$94,931 88		$98,648 81

* Reported in receipts of primary and grammar schools.

Expenditures for School Year Closing June 30, 1905.

Counties.	For Teachers' Salaries.	For Current Expenses, Books, and Apparatus.	For Buildings.	Total Expense for Year.	Balance on Hand at Close of Year.
Alameda	$1,824 00	$265 00		$2,089 00	
Fresno	712 50	115 00		827 50	
Los Angeles	61,188 55	3,268 94		64,457 49	$1,428 52
Orange	1,295 00	100 00		1,395 00	
Riverside	1,000 00	200 00		1,200 00	
Sacramento	9,350 00	757 00		10,107 00	
San Diego	4,570 00	500 00		5,070 00	
Santa Barbara	4,602 50	923 31		5,525 81	1,948 44
Santa Cruz	1,250 00	150 00		1,400 00	100 00
Yolo	585 00	43 00		628 00	22 00
Totals	$86,377 55	$6,322 25		$92,699 80	$3,498 96

TABLE No. 19—STATISTICS OF KINDERGARTENS—Continued.

Expenditures for School Year Closing June 30, 1906.

Counties.	For Teachers' Salaries.	For Current Expenses, Books, and Apparatus.	For Buildings.	Total Expense for Year.	Balance on Hand at Close of Year.
Alameda	$1,824 00	$167 75	.....	$1,991 75	.....
Fresno	See expenditures of primary and grammar schools.				
Los Angeles	60,419 75	3,762 19	.....	64,181 94	$1,627 66
Orange	1,377 50	75 00	.....	1,452 50	.....
Riverside	945 00	38 00	$1,825 00	2,808 00	.....
Sacramento	9,350 00	750 00	.....	10,100 00	.....
San Bernardino	630 00	20 00	.....	650 00	.....
San Diego	4,462 00	244 58	.....	4,706 58	.....
San Francisco	900 00	100 00	.....	1,000 00	.....
Santa Barbara	4,300 00	1,055 91	29 40	5,385 31	1,936 27
Santa Cruz	See expenditures of primary and grammar schools.				
Tehama	600 00	175 00	.....	775 00	201 40
Yolo	373 75	1,277 61	.....	1,651 36	181 04
Totals	$85,182 00	$7,666 04	$1,854 40	$94,702 44	$3,946 37

Valuation of Property for Years Ending June 30, 1905 and 1906.

Counties.	Value of Lots, Buildings, and Furniture.		Valuation of Books and Apparatus.		Total Valuation of All Property.	
	1905.	1906.	1905.	1906.	1905.	1906.
Alameda	.....	.....	$200 00	$200 00	$200 00	$200 00
Fresno	Reported with primary and grammar schools.					
Los Angeles	24,500 00	29,530 00	1,750 00	1,750 00	26,250 00	31,280 00
Orange	2,000 00	3,000 00	600 00	200 00	2,600 00	3,200 00
Riverside	200 00	2,000 00	100 00	50 00	300 00	2,050 00
Sacramento	10,000 00	10,000 00	1,000 00	1,000 00	11,000 00	11,000 00
San Bernardino	.....	.....	.....	10 00	.....	10 00
San Diego	2,500 00	1,700 00	.....	.....	2,500 00	1,700 00
San Francisco	Reported with primary and grammar schools.					
Santa Barbara	2,000 00	9,800 00	500 00	200 00	2,500 00	10,000 00
Santa Cruz	Reported with primary and grammar schools.					
Tehama	.....	150 00	.....	25 00	.....	175 00
Yolo	100 00	130 00	50 00	50 00	150 00	180 00
Totals	$41,300 00	$56,310 00	$4,200 00	$3,485 00	$45,500 00	$59,795 00

NORMAL SCHOOLS.

STATE NORMAL SCHOOL, SAN DIEGO.

SAN DIEGO STATE NORMAL SCHOOL.

By SAMUEL T. BLACK, President.

From the President's Annual Report to the Board of Trustees for the fiscal year ending June 30, 1905.

Seeing that the building is now complete, permit me to refer briefly to the history of its construction. It was begun in the fall of 1898, so that nearly seven years have been spent in its construction and equipment. To some it may seem that the growth has been slow—too slow for the strenuous, restless spirit of this western civilization. And yet the State has builded wisely and well. The time occupied in construction and equipment has enabled you to meet all the demands of the school during its period of development in a much more intelligent and effective manner than would have been possible had the building and equipment been completed in one, two, or even three years. Instead of erecting a building and molding a school to fit into it, you have been able to mold a building to fit the school. In other words, the school itself was considered of prime importance, and that the building should conform to its needs. The library needs light and sunshine. The gymnasium needs atmospheric conditions approaching as nearly as possible to those prevailing in the open air. The art room needs the steady light that comes from the north. Each of the laboratories demands its own peculiar conditions and surroundings. The gradual construction of the building having paralleled the rational development of the school, you were enabled to meet these various conditions in a most satisfactory manner. Yet, in meeting the wants peculiar to the various departments of the school, the necessity of beauty and symmetry in construction has not been lost sight of.

The bill creating the State Normal School of San Diego became a law by the signature of Governor Budd on March 13, 1897. It carried an appropriation of $50,000 for support and building purposes. In 1899 there was appropriated $101,300 for the same purposes. In 1901, $59,000 was appropriated for maintenance alone for two years. In 1903 the appropriations for building and support amounted to $123,000. The last Legislature appropriated $5,000 for improving the campus, which has not yet been expended, and, therefore, will not be taken into consideration in this report. The total appropriations to January 1, 1905, amounted to $333,300.

The expenditures are as follows (architects' fees, salaries of attorney

and superintendent of construction, advertising, etc., are included in the building items):

Buildings:	
Central portion	$32,403 19
East wing	38,095 62
West wing	55,870 98
Total for buildings (including steam heating for entire building and other items)	$126,369 79
Library books	5,514 61
Apparatus	5,128 46
Furniture	9,604 02
Contingent expenses	19,425 92
Salaries of employés	168,253 03
Grand total to June 30, 1905	$324,295 83

During the year we admitted 119 new students, an increase of 47 per cent over the year preceding. As to previous preparation, they are distributed as follows:

Graduates from the ninth year	40
Graduates from accredited high schools	25
From partial high school courses	26
From other normal schools	15
From colleges and universities	7
On examination	4
Experienced teachers	16
Total	133
Counted twice	14
Net number of entrants	119

This number of entrants exceeds that of any other year excepting the opening year, when 135 students were admitted. Should this be repeated next year, as now seems more than probable, the gross enrollment will approach 300 for the year 1905-06. This ought to be very nearly the limit for any normal school. The tendency to-day in the United States is toward smaller enrollment. Only one or two of the thirteen Massachusetts normal schools exceeds 200. The German normal schools limit the enrollment to about 100 students. Increased enrollment in the normal school proper calls for a corresponding increase in the training school. The total enrollment for both normal school and training school for the year is 432.

During the year there have been added the gymnasium, bathrooms, manual training room, new library quarters, new biology and chemistry laboratories, museum, and the auditorium. There have been added more than 1,000 volumes to the library and over $1,000 have been expended on added apparatus for the laboratories. A cistern for rainwater has been constructed, which now contains nearly 12,000 gallons of pure water. We know it is pure, because we have had a report from the bacteriologist at the University of California to that effect. This water is piped throughout the building for drinking purposes.

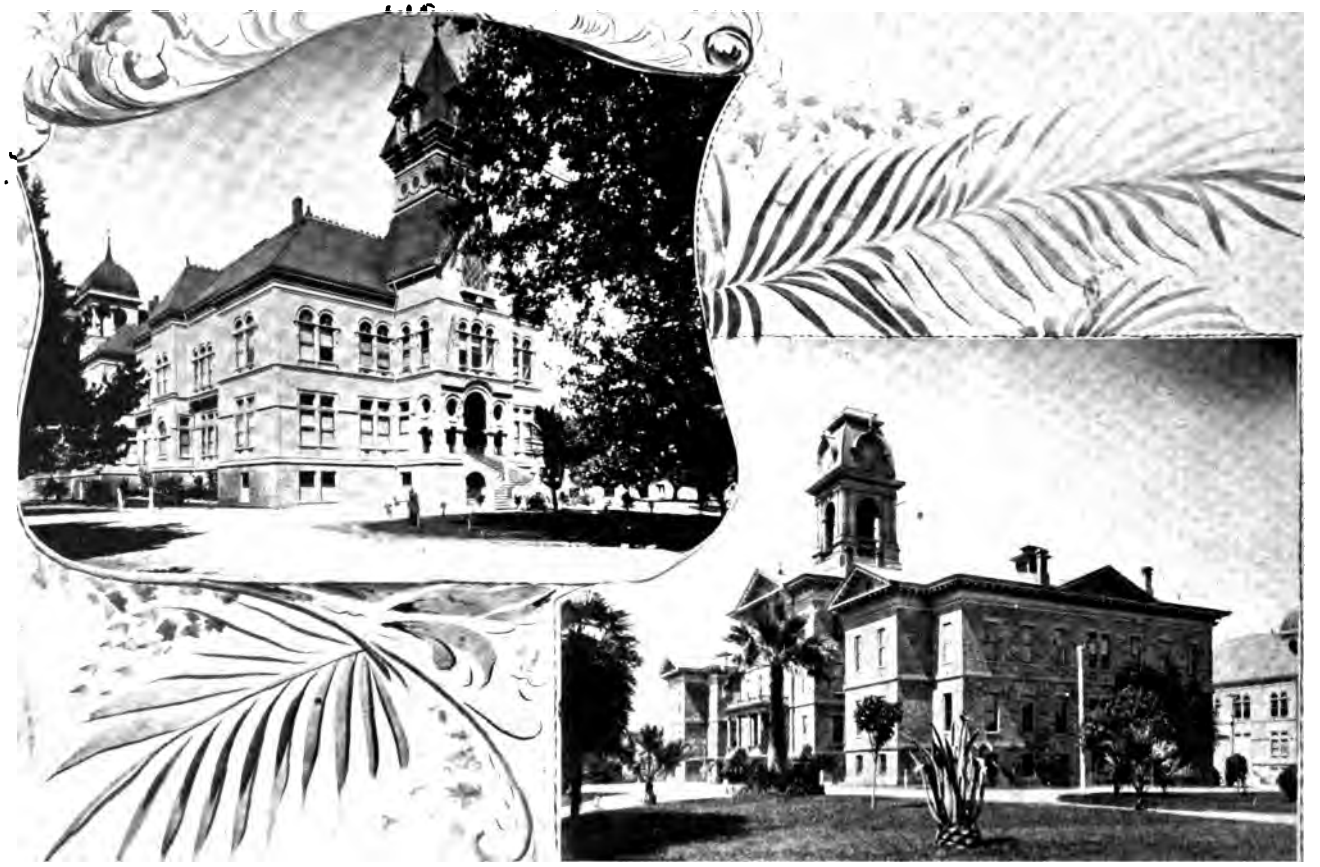
The number of graduates for the several academic years is as follows:

1899-1900	26
1900-1901	25
1901-1902	47
1902-1903	63
1903-1904	45
1904-1905	44
Total	250

These graduates are distributed among the various counties of the State. A large proportion of them are teaching in the cities and larger towns. Reports from superintendents and school officers concerning their work are exceedingly gratifying. One of our first graduates is now a division superintendent in the Philippines. Two have been principals of high schools over there, chosen over university graduates because of their teaching ability.

It gives me great pleasure to report that the instructors and other employés are faithful, efficient, and conscientious in the discharge of their various duties. As a result, the close of the year finds the school in a very satisfactory condition.

I regret to have to report the resignation of four very competent members of the faculty: Mr. Percy E. Davidson, who is continuing his studies at Harvard; Miss Mary Maynes Smith, who is to be married in the fall; Miss Josephine Batchelder, on account of continued ill health; and Dr. Anne Moore, who has concluded to take up a different line of work elsewhere.



SAN JOSE STATE NORMAL SCHOOL.

By MORRIS E. DAILEY, President.

Summer Session.—On June 26, 1905, the third Summer Session of the San José State Normal School opened with a large enrollment of teachers from most of the counties of California and from many outside states. The session lasted six weeks, closing August, 1905. The total enrollment in all departments was 541. This was almost double the attendance of the session of 1904. Regular Normal School work was given in all lines by our Faculty. They were assisted by Mr. Frederic H. Ripley of Boston, and Miss Estelle Carpenter of San Francisco, who gave courses in music, and by Prof. D. S. Snedden of Stanford University, who gave courses in education.

It seems but right that a word be said of the members of our Faculty in regard to the work in the Summer School. For three years they have voluntarily remained and worked during the entire Summer Session of six weeks and have received no additional pay. This, to my mind, is a display of loyalty to an institution and to the cause of education in general that is worthy of commendation.

Preparations were being made for a Summer Session this year which would have been largely attended, but the earthquake of April 18, 1906, so injured our buildings that the session for this year was abandoned.

School in General.—During the past year a few changes have been made in our course of study. More emphasis is being laid upon the teaching of agriculture and domestic science. No department of the latter subject has been established, but considerable work has been done in connection with our Training School by the children of the sixth, seventh and eighth grades.

The number of students enrolled for the year ending June 30, 1906, is larger than at any time since going upon a high school basis. The number of high school graduates who have enrolled as new students has increased each year. During the past year the increase was more than 20 per cent over the number enrolled for the year ending June 30, 1905.

We have demonstrated to our own satisfaction that this Normal School, located as it is, can be more satisfactorily conducted upon a high school basis of admission than upon a lower standard of admission. We are sending out more graduates every year than we did when the lower basis of admission was in effect.

The State is not concerned with the total enrollment of its State Normal Schools so much as it is with the number of graduates—the output of teachers each year. An enrollment of 400 under the high school basis means more teachers added to the ranks each year than an enrollment *of 800 under a grammar* grade basis of admission.

STATE NORMAL SCHOOL, LOS ANGELES

LOS ANGELES STATE NORMAL SCHOOL.

BY DR. J. F. MILLSPAUGH, PRESIDENT.

ollowing is the registry of attendance by classes for each of the two s from July 1, 1904, to June 30, 1906:

SCHOOL YEAR ENDING JUNE 30, 1905.

GENERAL PROFESSIONAL COURSE.

Seniors—	Males	6	
	Females	172	
			178
Juniors—	Males	7	
	Females	158	
			165
*Sub-Juniors—	Males	3	
	Females	68	
			71

KINDERGARTEN TRAINING COURSE.

Seniors	18
Juniors	16

SPECIAL STUDENTS AND VISITING TEACHERS.

Males	2	
Females	20	
		22
Total in Professional Department		470
Pupils enrolled in Training School		597
Total enrolled in all departments		1,067

SCHOOL YEAR ENDING JUNE 30, 1906.

GENERAL PROFESSIONAL COURSE.

Seniors—Males		3	
	Females	197	
			200
Juniors—Males		4	
	Females	140	
			144
Sub-Juniors			12

KINDERGARTEN TRAINING COURSE.

Seniors	16	
Juniors	24	
		40

SPECIAL STUDENTS AND VISITING TEACHERS.

Males	3	
Females	18	
		21
Total in Professional Department		417
Pupils enrolled in Training School		551
Total enrolled in all departments		968

GRADUATES.

DURING YEAR ENDING JUNE 30, 1905.

Males	5	
Females	115	
		120

DURING YEAR ENDING JUNE 30, 1906.

Males	3	
Females	153	
		156

*After admissions were passed on the high school basis, the students remaining in the first second year classes of the four-year course were known as sub-juniors.

In connection with the statistics of attendance for the biennial period just closed, I desire to exhibit the facts relative to attendance, the number of graduates, and cost per graduate for each of the eight years ending June 30, 1906. These appear in the following tabular form:

Year Ending June 30—	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Enrolled—								
Men	56	64	51	35	28	25	19	9
Women	555	593	539	456	416	447	451	411
Totals	611	*657	590	491	444	472	470	420
Graduates—								
Men	5	11	10	10	8	8	5	3
Women	102	103	120	97	103	84	115	153
Totals	107	114	130	107	111	92	120	156
Cost per Graduate— (Based on salaries and support)	$492 63	$429 62	$420 46	$477 18	$480 67	$548 10	$434 90	$330 50

*Largest attendance in school's history.

Several interesting facts and deductions are discoverable in this table:

First—The steady decrease in the number of male students, indicating their early disappearance entirely from the school. Many causes exist for this deplorable condition. Chief of them all is the fact that the financial remuneration for teaching is so small in comparison with that following other lines of effort that young men are drawn into other occupations where their service is more highly rewarded. The change of basis of admission to the school from a ninth grade certificate to a high school diploma has played a large part in the falling off of the number of boys. When a way was open by which boys could complete in four years what was held to be equivalent to a high school course and a normal course, a good number were ready to enter upon it; but on graduation from a high school, with a choice open to them of a normal school course, a university course, or a business career promising far better pay than that of teaching, the normal school course was seldom chosen.

Second—The steady decrease in the number of female students. In 1899 and 1900 there were in Southern California relatively few high schools. It was easier and more satisfactory in every way for many students who contemplated teaching to enter the normal school and combine academic and professional study than to leave home to attend a high school, and follow that by further absence from home to attend a normal school. But at about this time new stimulus was given to secondary education by the establishment of union high schools. As a result of this movement the number of students who desired to take their academic training at the normal school rapidly diminished, and its enrollment not only grew smaller, but consisted increasingly of those whose academic study had been done in the high schools.

Since the opening of the school year 1904-5, when the four-year course was discontinued, only high school graduates, or those having equivalent preparation, have been admitted.* Since admissions have for two

*An exception was made in favor of a few students who were able to fall into the classes of the four-year courses, still remaining.

ears been upon the high school basis, it is not probable that attendance ill be further lessened; indeed, an increase from this time forward is xpected.

Doubtless it is true, also, that the San Diego Normal School has nrolled many students from San Diego and vicinity who but for it ould have entered this institution; but the leading cause of the essened attendance is that before referred to.

Third—Though the enrollment has steadily diminished, being for he year just closed less than two thirds that of 1900, it will be noted hat there is no corresponding decline in the number of graduates. With he smallest attendance for eight years, the past year has registered the argest number of graduates in the history of the school. I take it that he State is chiefly interested, not in the number of students enrolled, ut in the number of trained teachers sent into its public schools. If his is the true measure of a normal school's usefulness, this school has ad no more successful year. Of the eight years considered in this eport, during the first six the school admitted on both ninth grade ertificates and high school diplomas, and the ratio of graduates to nrollment was approximately 1 to 5. During the two years when dmission has been based on high school diplomas only, the ratio of raduates to enrollment has been approximately 1 to 3.

Fourth—The statements relative to the cost per graduate are of alue only as they tend to show that under the present plan of admission he State is paying less for every teacher sent out from the school than t did when, under the former system, the attendance was much larger.

At a meeting of the Joint Normal School Board held in April, 1904, Dr. Lewis S. Thorpe, of the Los Angeles Normal School Board, read a paper advocating the establishment of a three-year normal school ourse, and set forth forcibly the benefits that would accrue from such n extension of the two-year course. Briefly, the chief of these were as ollows:

1. The need of more extensive academic preparation by teachers of he common schools.

2. The desirability of forming a course more attractive than the present two-year course, which because of its brevity necessarily excludes ubjects earnestly desired by ambitious students.

3. The desirability of retaining students longer in the school to more leeply impress them with its spirit and aims.

4. To bring the normal school and the universities into helpful coöp-eration by so shaping the course of study in the former that two years f definite credit should be granted to its graduates by the latter.

5. As a result of the more attractive course and the establishment f such relations with the universities, the furnishing of sufficient in-ducement to bring a larger number of young men into the normal chools.

Following the discussion of Dr. Thorpe's paper, permission was given y the Joint Board for the establishment at Los Angeles of the course ecommended.

More than a year of careful study was given by the Faculty of this chool to the forming of a course of study which would most perfectly ulfill *the purposes had in view.* This study of the subject resulted in

the recommendation by the Faculty, first, that the existing two-year course of study be left undisturbed; and second, that an optional third year be added to the course and be made to include the desired subjects. This plan was approved by the Board of Trustees of the school. Under the proposed plan the two courses will be identical throughout the first year. At the opening of the second year, students electing the longer course will take some professional and some academic work, and the two lines of study will be carried on side by side for the remaining two years of the course.

The State University and Leland Stanford University have both expressed great interest in the plan, and both have given it their entire approval. Students who complete the longer course and carry with them the recommendation of the normal school will be given full junior standing in either university. This innovation places the school abreast of the most advanced normal schools of the country. Several important purposes will be subserved by this arrangement:

First—It will furnish students who plan to teach in elementary schools opportunity to enlarge their acquaintance with subjects organically related to those which they will be called upon to teach, and thus directly strengthen their preparation; it will give the broader outlook so much needed by all the instructors of youth; it will more perfectly develop that scholarship and culture and breadth of interest which are the true sources of every inspiring teacher's power. The increased efficiency thus developed will much more than compensate students for the additional time and expense required to complete the longer course.

Second—The extended course, begun at the normal school and completed at the university, will serve especially to prepare teachers for high school positions and for principalships. The pursuit of academic and professional subjects side by side is believed to be distinctly advantageous to both. From the beginning the student became accustomed to study not merely how he is to master subjects, but how he is to lead others to master them. With the acquisition of scholarship and culture, interest in teaching and sympathy with learners are aroused and developed. The prospective high school teacher or principal will go from the normal school to the university for the completion of his course with thorough scholastic preparation, with enthusiasm for his profession fully developed, with at least one year of valuable experience, and with aims clearly and intelligently defined. The two years of additional study necessary to obtain a degree will be devoted to such subjects as have special interest for the student in view of the work which, as teacher or supervisor, he proposes to undertake. Thus the normal school and university courses, combined and unified, will be made to serve in the largest possible manner to equip the teacher or principal for professional efficiency.

Third—The advantages of this arrangement to residents of Southern California, especially, in point of convenience and economy will be apparent. It is expected that many ambitious students, unable to meet the expenses necessary for four years of university residence, will find it possible to realize their aims when two years of university work may be taken while residing at home or in the near vicinity. Careful estimates of expenses necessary for travel, boarding, laundry, etc., indicate

that for students living at home the outlay required for the completion of the two courses as proposed will be less than that of a university course alone, under the usual conditions heretofore existing.

During the two years under review, the work of the school has been carried on with little change as to general plan and with few modifications in details of administration. As its president I have endeavored to acquaint myself thoroughly with the work of the institution and to understand its relations to the educational work of the State. In addition to the functions ordinarily performed by such schools, the endeavor has been made to render the school useful to teachers not in regular attendance upon its instructions. In the pursuance of this aim Saturday classes have been held at the school for the benefit of teachers who at that time only are free to attend them. The experiment has been sufficiently successful to lead to the hope that further efforts in this direction would be appreciated. Several members of the Faculty have gone to neighboring towns and met groups of teachers for lectures, conferences, etc. All this work has been without other expense to those benefited than payment of railroad fare. Our teachers are ready to respond to what they believe will be a much larger demand of this kind in the future.

I am glad to report the election for next year of a graduate of the Agricultural Department of the State University, who has been chosen for the especial purpose of inaugurating work in elementary agriculture and the more practical forms of nature study. In connection with this important work he will also attempt to bring the museum of the school into more helpful relations with the work of instruction. Under the best modern administration the school museum bears some such relation to science teaching, nature study, geography, etc., as the library does to literature and history.

The most serious criticism that can be brought against the school (and in this the other normal schools share) is connected with the course of study, which requires too many hours of work each day of students. To meet the requirements of the State Normal Board students are compelled to carry full twenty-two hours of recitation, etc., a week. This is a demand which not only overtaxes strength, but also prevents the development of scholarly habits. There is not time enough to really study anything with the thoroughness that makes for culture and scholarship. In my judgment no student should be permitted to carry to exceed twenty hours a week, including prescribed gymnasium work. Hop-skip-and-jump methods of work are as deadly in a normal school as they are in a university.

In closing this report I wish to call attention to the great improvements made in our buildings and appointments during the past year. An excellent heating plant has been installed, furnishing steam heat to all parts of the building and excellent ventilation to nearly all the rooms. In addition, the building has been straightened up and made secure by rebuilding the foundation in part and repairing the superstructure. The gymnasium has been refloored, ceiled, and furnished with hot water as well as cold water for shower baths. The electric bell system has been remodeled and put into good working order. In short, the building, as it now stands, barring certain irremediable defects, is in good condition and serves well the uses of the school.

TABLE No. 20—STATE NORMAL SCHOOLS—Continued.

Receipts from all Sources for the School Year ending June 30, 1906.

Location of School.	Balance on Hand at Reginning of School Year.	Amount Received from State Appropriation.	Amount Received from Tuition and Other Sources.	Total Receipts from all Sources.
Chico	$67 24	$45,100 00	$1,329 05	$46,496 29
Los Angeles	2,492 64	104,000 00	208 25	106,700 89
San Diego	4,911 29	33,500 00	14 80	38,426 09
San Francisco	316 33	178,500 00	1,576 33	180,392 66
San José	392 50	57,000 00	7 70	57,400 20
Totals	$8,180 00	$418,100 00	$3,136 13	$429,416 13

Expenditures for the School Year ending June 30, 1905.

Location of School.	Amount Paid for Teachers' Salaries.	Amount Paid for Janitors, Gardeners, Librarian, Supplies, Etc.	Amount Paid for Sites, Buildings, and Furniture.	Amount Paid for Library Books and for Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Chico	$27,809 00	$6,984 25	$28,228 75	$908 08	$63,930 08	$67 24
Los Angeles	47,587 79	4,601 90	1,129 26	1,003 26	54,322 21	2,536 66
San Diego	24,391 73	6,056 55	20,388 39	2,366 75	53,203 42	5,322 56
San Francisco	17,026 22	4,010 03	307 40	739 69	22,083 34	406 94
San José	47,006 61	9,097 14	2,068 51	1,088 67	59,260 93	739 01
Totals	$163,821 35	$30,749 87	$52,122 31	$6,106 45	$252,799 98	$9,072 41

Expenditures for the School Year ending June 30, 1906.

Location of School.	Amount Paid for Teachers' Salaries.	Amount Paid for Janitors, Gardeners, Librarian, Supplies, Etc.	Amount Paid for Sites, Buildings, and Furniture.	Amount Paid for Library Books and for Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Chico	$27,596 00	$6,869 14	$9,912 72	$752 38	$45,130 24	$1,366 05
Los Angeles	50,615 20	4,362 46	44,951 34	1,244 77	101,173 77	5,527 12
San Diego	24,416 35	10,586 07	1,483 97	869 49	37,355 88	1,070 21
San Francisco	20,479 28	3,690 52	53,686 49	355 96	78,212 25	102,180 41
San José	43,735 10	8,000 24	1,821 86	698 50	54,255 70	3,144 50
Totals	$166,841 93	$33,508 43	$111,856 38	$3,921 10	$316,127 84	$113,288 29

Valuation of Property, 1905.

Location of School.	Area of Grounds.	Grounds.	Buildings.	Furniture.	Libraries.	Apparatus.	Total.
	Acres.						
Chico	8.00	$8,000	$158,500	$6,750 00	$14,100 00	$6,300 00	$193,650 00
Los Angeles	4.50	243,000	153,050	7,500 00	5,000 00	4,000 00	412,550 00
San Diego	16.50	30,000	126,000	9,539 66	5,358 54	5,006 86	175,905 06
San Francisco				1,500 00	4,200 00	500 00	6,200 00
San José	8.30	50,000	213,224	10,000 00	11,900 00	8,700 00	293,824 00
Totals	37.30	$331,000	$650,774	$35,289 66	$40,558 54	$24,506 86	$1,082,129 06

TABLE No. 20.

STATISTICS OF STATE NORMAL SCHOOLS.

Teachers Employed.

Location of School.	Men.		Women.		Total.	
	1905	1906.	1905.	1906.	1905.	1906.
Chico	6	7	14	13	20	20
Los Angeles	9	9	20	19	29	28
San Diego	6	6	10	10	16	16
San Francisco	5	5	8	12	13	17
San José	10	10	20	23	30	33
Totals	36	37	72	77	108	114

Attendance.

Location of School.	Normal Department.						Training Department.					
	Men.		Women.		Total.		Boys.		Girls.		Total.	
	1905.	1906.	1905	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.	1906.
Chico	43	58	258	328	301	386	120	97	185	140	305	237
Los Angeles	19	9	451	411	470	420	237	217	314	303	551	520
San Diego	30	22	216	235	246	257	85	91	101	132	186	223
San Fran'co	1	0	177	220	178	220	217	175	178	225	395	400
San José	40	60	568	681	608	741	144	183	109	169	253	352
Totals	133	149	1,670	1,875	1,803	2,024	803	763	887	969	1,690	1,732

Receipts from all Sources for the School Year ending June 30, 1905.

Location of School.	Balance on Hand at Beginning of School Year.	Amount Received from State Appropriation.	Amount Received from Tuition and Other Sources.	Total Receipts from all Sources.
Chico	$29,132 22	$33,800 00	$1,065 10	$63,997 32
Los Angeles	3,770 82	53,000 00	88 05	56,858 87
San Diego	22,515 14	36,000 00	10 84	58,525 98
San Francisco	682 68	20,500 00	1,307 60	22,490 28
San José	3,997 34	56,000 00	2 60	59,999 94
Totals	$60,098 20	$199,300 00	$4,474 19	$261,872 39

TABLE No. 20—STATE NORMAL SCHOOLS—Continued.

Receipts from all Sources for the School Year ending June 30, 1906.

Location of School.	Balance on Hand at Reginning of School Year.	Amount Received from State Appropriation.	Amount Received from Tuition and Other Sources.	Total Receipts from all Sources.
Chico	$67 24	$45,100 00	$1,329 05	$46,496 29
Los Angeles	2,492 64	104,000 00	208 25	106,700 89
San Diego	4,911 29	33,500 00	14 80	38,426 09
San Francisco	316 33	178,500 00	1,576 33	180,392 66
San José	392 50	57,000 00	7 70	57,400 20
Totals	$8,180 00	$418,100 00	$3,136 13	$429,416 13

Expenditures for the School Year ending June 30, 1905.

Location of School.	Amount Paid for Teachers' Salaries.	Amount Paid for Janitors, Gardeners, Librarian, Supplies, Etc.	Amount Paid for Sites, Buildings, and Furniture.	Amount Paid for Library Books and for Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Chico	$27,809 00	$6,984 25	$28,228 75	$908 08	$63,930 08	$67 24
Los Angeles	47,587 79	4,601 90	1,129 26	1,003 26	54,322 21	2,536 66
San Diego	24,391 73	6,056 55	20,388 39	2,366 75	53,203 42	5,322 56
San Francisco	17,026 22	4,010 03	307 40	739 69	22,083 34	406 94
San José	47,006 61	9,097 14	2,068 51	1,088 67	59,260 93	739 01
Totals	$163,821 35	$30,749 87	$52,122 31	$6,106 45	$252,799 98	$9,072 41

Expenditures for the School Year ending June 30, 1906.

Location of School.	Amount Paid for Teachers' Salaries.	Amount Paid for Janitors, Gardeners, Librarian, Supplies, Etc.	Amount Paid for Sites, Buildings, and Furniture.	Amount Paid for Library Books and for Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Chico	$27,596 00	$6,869 14	$9,912 72	$752 38	$45,130 24	$1,366 05
Los Angeles	50,615 20	4,362 46	44,951 34	1,244 77	101,173 77	5,527 12
San Diego	24,416 35	10,586 07	1,483 97	869 49	37,355 88	1,070 21
San Francisco	20,479 28	3,690 52	53,686 49	355 96	78,212 25	102,180 41
San José	43,735 10	8,000 24	1,821 86	698 50	54,255 70	3,144 50
Totals	$166,841 93	$33,508 43	$111,856 38	$3,921 10	$316,127 84	$113,288 29

Valuation of Property, 1905.

Location of School.	Area of Grounds.	Grounds.	Buildings.	Furniture.	Libraries.	Apparatus.	Total.
	Acres.						
Chico	8.00	$8,000	$158,500	$6,750 00	$14,100 00	$6,300 00	$193,650 00
Los Angeles	4.50	243,000	153,050	7,500 00	5,000 00	4,000 00	412,550 00
San Diego	16.50	30,000	126,000	9,539 66	5,358 54	5,006 86	175,905 06
San Francisco				1,500 00	4,200 00	500 00	6,200 00
San José	8.30	50,000	213,224	10,000 00	11,900 00	8,700 00	293,824 00
Totals	37.30	$331,000	$650,774	$35,289 66	$40,558 54	$24,506 86	$1,082,129 06

TABLE No. 20—STATE NORMAL SCHOOLS—Continued.

Valuation of Property, 1906.

Location of School.	Area of Grounds.	Grounds.	Buildings.	Furniture.	Libraries.	Apparatus.	Total.
	Acres.						
Chico	8.00	$8,000	$168,500	$6,750 00	$14,100 00	$6,300 00	$203,650 00
Los Angeles	4.50	250,000	185,000	7,500 00	6,000 00	4,000 00	452,500 00
San Diego	16.50	30,000	126,500	10,006 29	6,031 57	5,203 09	177,740 95
San Francisco	.87	50,000	3,000	578 19	335 96	.....	53,914 15
San José	8.30	50,000	48,790	10,000 00	11,900 00	8,700 00	129,390 00
Totals	38.17	$388,000	$531,790	$34,834 48	$38,367 53	$24,203 09	$1,017,195 10

Number of Volumes in Libraries.

Location of School.	1905.				1906.			
	At Beginning of Year.	Bought or Donated during Year.	Lost or Worn Out during Year.	Total.	At Beginning of Year.	Bought or Donated during Year.	Lost or Worn Out during Year.	Total.
Chico	11,308	856	10	12,154	12,154	475	25	12,604
Los Angeles	12,292	858	47	13,103	13,103	1,178	51	14,230
San Diego	3,560	1,155	8	4,707	4,707	1,000	19	5,688
San Francisco	7,457	909	336	8,030	8,030	3,494	8,535	2,989
San José	8,600	440	.....	9,040	9,040	520	.....	9,560
Totals	43,217	4,218	401	47,034	47,034	6,667	8,630	45,071

TABLE No. 20—STATE NORMAL SCHOOLS—Continued.

Number of Graduates Since Organization.

Year.	Chico. (Organized 1889.)			Los Angeles. (Organized 1882.)			San Diego. (Organized 1897.)			San Francisco. (Organized 1899.)			San José (Organized 1862.)		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1863													0	4	4
1864													1	18	19
1865													4	19	23
1866													8	25	33
1867													4	27	31
1868													11	37	48
1869													3	26	29
1870													4	40	44
1871													4	17	21
1872													4	13	17
1873													4	16	20
1874													5	28	33
1875													9	36	45
1876													8	30	38
1877													6	36	42
1878													10	48	58
1879													8	36	44
1880													6	41	47
1881													2	32	34
1882													13	62	75
1883													14	79	93
1884				3	19	22							16	72	88
1885				6	29	35							13	96	109
1886				11	32	43							18	82	100
1887				4	44	48							11	87	98
1888				4	31	35							18	103	121
1889				10	47	57							17	112	129
1890				8	41	49							14	142	156
1891	3	14	7	9	62	71							8	96	104
1892	6	18	24	6	72	78							10	99	109
1893	5	27	32	11	80	91							5	131	136
1894	3	27	30	11	65	76							10	124	134
1895	3	49	52	12	72	84							8	148	156
1896	9	35	44	10	55	65							13	153	166
1897	3	30	33	7	48	55							10	99	109
1898	3	17	20	10	78	88							5	81	86
1899	6	39	45	5	102	107							10	100	110
1900	16	53	69	11	103	114	3	23	26				12	110	122
1901	12	37	49	10	120	130	5	20	25	0	36	36	8	82	90
1902	6	35	41	10	97	107	5	42	47	0	33	33	20	158	178
1903	9	52	61	8	103	111	2	61	63	0	54	54	18	193	211
1904	5	35	40	8	84	92	6	39	45	0	40	40	14	135	149
1905	9	53	62	5	115	120	5	39	44	0	46	46	6	147	153
1906	7	46	53	3	153	156	1	36	37	0	64	64	7	162	169
Totals	105	567	672	182	1652	1834	27	260	287	0	273	273	410	3466	3876

Total number of graduates—Men 724
Women 6,218
6,942

TABLE No. 21.

Number of Graduates of High Schools for the Year Closing June 30, 1905, that Entered State Normal Schools during the School Year Closing June 30, 1906.

Counties.	Chico.		Los Angeles.		San Diego.		San Francisco.		San José.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Alameda						1				4
Alpine										
Amador										
Butte		5								
Calaveras										
Colusa										
Contra Costa										4
Del Norte										
El Dorado										
Fresno										17
Glenn	1									
Humboldt										2
Inyo										
Kern										
Kings									3	6
Lake										1
Lassen										
Los Angeles				37						
Madera				1						1
Marin										
Mariposa										
Mendocino										4
Merced										3
Modoc										
Mono										
Monterey										5
Napa										
Nevada						1				2
Orange				6		2				
Placer										
Plumas										
Riverside						1				
Sacramento										1
San Benito										3
San Bernardino				3		1				1
San Diego						10				
San Francisco										
San Joaquin										
San Luis Obispo						1				2
San Mateo										8
Santa Barbara				1		1				1
Santa Clara									2	51
Santa Cruz										1
Shasta										
Sierra										
Siskiyou		1								
Solano										
Sonoma										2
Stanislaus										5
Sutter										
Tehama										
Trinity										
Tulare				1						7
Tuolumne										
Ventura				5						
Yolo										3
Yuba										
Totals	1	6		54		18			5	134

Detailed report, and records from which it was made, were burned in the San Francisco fire of April 18, 1906.

TABLE No. 22.

Number of Graduates of High Schools for the Year Closing June 30, 1905, that Entered Universities in California during the Year Closing June 30, 1906.

Counties.	University of California and Affiliated Colleges.								Leland Stanford Jr. University.	
	Berkeley.		Medical Department.		Hastings Law School.		Dental College.			
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Alameda	60	64					5		11	3
Alpine										
Amador										
Butte	4	4							3	
Calaveras							1			
Colusa		2							1	
Contra Costa	4								2	
Del Norte							1			
El Dorado							1			
Fresno	5	8							3	1
Glenn										
Humboldt	3	3							2	1
Inyo										
Kern	1	2							2	1
Kings	2	2								
Lake		2								
Lassen										
Los Angeles	27	21							35	16
Madera									1	
Marin		2							1	
Mariposa										
Mendocino	2	1					1		8	
Merced	4									
Modoc									1	
Mono										
Monterey	1	2							4	2
Napa	4						1		1	
Nevada	5	4								
Orange	5	1							3	2
Placer	2	2								
Plumas										
Riverside	15	4							5	2
Sacramento	5	8					3		2	
San Benito	2	2							1	
San Bernardino	1	3							6	6
San Diego	3	2							12	6
San Francisco	38	42					5		24	6
San Joaquin	6	6							3	
San Luis Obispo	7	4							2	
San Mateo	1								2	2
Santa Barbara	2	5					2		6	3
Santa Clara	9	8							42	34
Santa Cruz	4	8					1		1	1
Shasta	2									
Sierra										
Siskiyou										
Solano	5	4							3	
Sonoma	8	9							2	
Stanislaus	1								2	
Sutter										
Tehama	2									
Trinity										
Tulare	8	3					5		2	4
Tuolumne										
Ventura	2	2								1
Yolo	4	1							4	3
Yuba	2	2								
Totals	256	233					26		197	94

Partial university course is required for admission.

Records destroyed in San Francisco fire of April 18, 1906.

CALIFORNIA POLYTECHNIC SCHOOL.

By LEROY ANDERSON, Director.

The school closed its third year on June 15, 1906, at which time it held its first graduating exercises. The three years have been a process of growth and of the development of the ideas and ideals on which the school was established. The management of the school feels that it has made for itself a place among the State educational institutions. It differs in organization and aim from any of the other educational institutions heretofore established by the State, and was thus more or less of an experiment. It has, however, passed the experimental stage and is so well and firmly established as to command the attention of the educators of the country.

The school in its curriculum is modeled after the land-grant colleges which were established in the various states and territories under the provisions of the Morrill Act of 1862. It has been our endeavor to follow as closely as possible the successes of those institutions, and to follow their methods in so far as it was advisable in an institution of a purely secondary grade. It is the first attempt by a State in the United States to establish a secondary industrial school separate and distinct from any other institution. Inasmuch as the methods of instruction and courses of study in the industrial colleges have been so thoroughly worked out, it has been largely a matter of adaptation to fit them to a school of secondary grade. The courses of study include agriculture, mechanics, and household arts.

The student's time is divided about equally between recitation and class work on the one hand, and laboratory, shop, or field work on the other. On the whole it is probable that the Polytechnic gives a larger amount of shop and field work than is included in similar courses in the land-grant colleges. This being true, the school has not been able to fulfill the requirements for entrance to the university, as so much time is given to technical work, which is not yet looked upon as an important university entrance requirement.

This style of work is peculiarly adapted to young people who have just finished the grammar school. Field work, gardening, horticulture, animal husbandry, dairying, and the like are attractive to those interested in agriculture. In like manner forging, carpentry, electrical and other laboratories are attractive to those interested in mechanics. Sewing, dressmaking, cooking, and other household occupations appeal to the girls, who are usually domestically inclined. All of this work has an educational value, which is increased and enhanced by the academic and scientific studies which are made to coördinate with the laboratory and field work.

TABLE No. 23—STATISTICS OF CALIFORNIA POLYTECHNIC SCHOOL FOR 1905 AND 1906.

	1905.	1906.
Number of teachers employed—		
Men	5	7
Women	1	2
Total	6	9
Number of students enrolled, 1905—		
First year— Boys, 34; Girls, 12	46	
Second year—Boys, 11; Girls, 2	13	
Total— Boys, 45; Girls, 14	59	
Number of students enrolled, 1906—		
First year— Boys, 43; Girls, 21		64
Second year—Boys, 15; Girls, 8		23
Third year— Boys, 9; Girls, 4		13
Total— Boys, 67; Girls, 33		100
Number of graduates, 1906—		
Boys, 4; Girls, 4		8
Financial Statement—		
Receipts—		
Balance on hand July 1	$10,269 75	$4,182 53
From State apportionment	17,201 25	74,147 00
From laboratory fees	692 60	920 40
From dormitory	3,508 00	4,350 15
From farm, dairy, poultry, and power house	947 00	812 81
Total receipts from all sources	$32,618 60	$84,412 89
Expenditures—		
For teachers' salaries	$9,545 00	$15,283 31
For janitors' salaries	1,088 00	618 90
For services on farm and grounds	2,134 00	2,908 55
For supplies	3,182 74	10,287 20
For buildings and sites	5,275 55	8,685 33
For books and magazines	487 43	480 05
For printing	469 00	400 00
For trustees' expenses	571 19	214 35
For improvement of grounds	999 46	2,459 30
For contingent supplies	4,683 70	6,168 27
For pay of engineers and assistants (students)		902 00
Total expenses for year	$28,436 07	$48,407 26
Balance on hand June 30	$4,182 53	$36,005 63
Valuation of State property—		
Area of grounds, 281.04 acres.		
Valuation of grounds	$10,000 00	$12,000 00
Valuation of buildings	54,000 00	59,000 00
Valuation of furniture	3,300 00	3,800 00
Valuation of library	750 00	1,200 00
Valuation of apparatus	1,500 00	5,000 00
Valuation of farm stock and tools	3,000 00	5,000 00
Totals	$72,550 00	$86,000 00

STATE TEXT-BOOKS.

The following prices of State text-books were fixed by the State Board of Education for the school year ending June 30, 1906:

Name of Book.	Cost Price at Sacramento.	Postage per Book.	By Mail.	Price to Pupils from Retail Dealers.
Primer (new)	20 cents.	5 cents.	25 cents.	25 cents.
First Reader (new)	24 cents.	5 cents.	29 cents.	29 cents.
Second Reader (new)	28 cents.	7 cents.	35 cents.	35 cents.
Third Reader (new)	42 cents.	8 cents.	50 cents.	50 cents.
Fourth Reader (new)	49 cents.	11 cents.	60 cents.	60 cents.
Speller	19 cents.	6 cents.	25 cents	25 cents.
First Book in Arithmetic (new)	28 cents.	7 cents.	35 cents.	35 cents.
Grammar School Arithmetic	50 cents.	10 cents.	60 cents.	60 cents.
English Lessons, Book I	28 cents.	7 cents.	35 cents.	35 cents.
English Lessons, Book II	46 cents.	9 cents.	55 cents.	55 cents.
Introductory History	45 cents.	10 cents.	55 cents.	55 cents.
Grammar School History	81 cents.	14 cents.	95 cents.	95 cents.
Introductory Geography	55 cents.	9 cents.	64 cents.	64 cents.
Grammar School Geography	98 cents.	22 cents.	$1.20	$1.20
Physiology and Hygiene	41 cents.	8 cents.	49 cents.	49 cents.
Revised First Reader	16 cents.	4 cents.	20 cents.	20 cents.
Revised Fourth Reader	53 cents.	7 cents.	60 cents.	60 cents.
First Reader (old series)	15 cents.	5 cents.	20 cents.	20 cents.
Second Reader (old series)	33 cents.	8 cents.	41 cents.	40 cents.
Third Reader (old series)	40 cents.	12 cents.	52 cents.	55 cents.
English Grammar (old series)	42 cents.	8 cents.	50 cents.	50 cents.
U. S. History (old series)	50 cents.	12 cents.	62 cents.	65 cents.
Elemen'y Geography (old series).	50 cents.	10 cents.	60 cents.	60 cents.
Advanced Geography (old series)	$1.02	18 cents.	$1.20	$1.20

The following table shows the number of books sold prior to July 1, 1904, and the amount of money received for them; also the royalty paid for the use of plates of certain books:

Name of Book.	Number.	Amount.	School Book Fund.	Royalty Fund.
Revised First Reader	340,594	$54,495 04	$54,495 04	
Revised Second Reader	267,042	74,771 76	74,771 76	
Revised Third Reader	203,156	89,388 64	89,388 64	
Revised Fourth Reader	159,072	84,308 16	84,308 16	
Speller	368,116	90,482 25	90,482 25	
Primary Number Lessons	248,178	49,577 48	49,577 48	
Advanced Arithmetic	343,514	140,229 36	140,229 36	
Grammar School Arithmetic	2,029	1,014 50	750 73	$263 77
Lessons in Language	255,315	63,828 25	63,828 25	
Revised English Grammar	145,583	68,424 01	68,424 01	
History, Grammar School	32,862	26,618 22	16,759 62	9,858 60
U. S. History (old series)	137,434	96,203 80	96,203 80	
Elementary Geography	262,224	131,112 00	131,112 00	
Introductory Geography	1,940	1,067 00	824 50	242 50
Advanced Geography	155,359	158,425 38	158,425 38	
Grammar School Geography	1,517	1,486 66	1,061 90	424 76
Physiology	100,361	46,680 50	46,680 50	
Civil Government	49,638	22,833 48	22,833 48	
First Reader (old series)	337,952	50,692 80	50,692 80	
Second Reader (old series)	230,696	74,956 44	74,956 44	
Third Reader (old series)	129,843	66,116 96	66,116 96	
English Grammar (old series)	112,567	47,278 14	47,278 14	
Primer (new)	267	53 40	40 58	12 82
Second Reader (new)	268	75 04	55 74	19 30
Totals	4,052,327	$1,440,119 27	$1,429,297 52	$10,821 75

TEXT-BOOKS SOLD DURING FISCAL YEARS 1904-05 AND 1905-06.

	Revised First Reader. Price, 16 Cents.		Revised Second Reader. Price, 28 Cents.		Revised Third Reader. Price, 44 Cents.		Revised Fourth Reader. Price, 53 Cents.		Speller. Price, 19 Cents.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
1904—July	5,815	$930 40	5,707	$1,597 96	4,194	$1,845 36	2,535	$1,343 55	3,522	$669 18
August	6,398	1,023 68	6,239	1,746 92	5,449	2,397 56	3,544	1,878 32	4,395	835 05
September	6,311	1,009 76	5,119	1,433 32	4,953	2,179 32	3,252	1,723 56	5,508	1,046 14
October	1,010	161 60	724	202 72	705	310 20	703	372 59	2,456	466 64
November	937	149 92	531	148 68	249	109 56	84	44 52	662	125 78
December	2,491	398 56	1,728	483 84	1,121	493 24	650	344 50	1,046	198 74
Totals	22,962	$3,673 92	20,048	$5,613 44	16,671	$7,335 24	10,768	$5,707 04	17,587	$3,341 53
1905—January	4,394	703 04	1,030	288 40	2,914	1,282 16	1,938	1,027 14	2,759	524 21
February	550	88 00			199	87 56	166	87 98	312	59 28
March	285	45 60			106	46 64	12	6 36	269	51 11
April	141	22 56			33	14 52	13	6 89	113	21 47
May	102	16 32			17	7 48	7	3 71	130	24 70
June	46	7 36			25	11 00	3	1 59	30	5 70
Totals	5,518	$882 88	1,030	$288 40	3,294	$1,449 72	2,139	$1,133 67	3,613	$686 47
1905—July	569	91 04			464	204 16	433	229 49	2,699	512 81
August					3	88			6,362	1,208 78
September					150	60 00			6,976	1,325 44
October					30	12 00			1,119	212 61
November					8	3 20			586	111 34
December			2	56					1,253	238 07
Totals	569	$91 04	2	$0 56	655	$280 24	433	$229 49	18,995	$3,609 05
1906—January									3,071	583 49
February									340	64 60
March									130	24 70
April									157	29 83
May									142	26 98
June									80	15 20
Totals									3,920	$744 80

TEXT-BOOKS SOLD DURING FISCAL YEARS 1904-05 AND 1905-06—Continued.

	Primer. Price, 20 Cents.			First Reader. Price, 24 Cents.			Second Reader. Price, 28 Cents.			Third Reader. Price, 42 Cents.		
	No.	Amount.	Royalty.	No.	Amount.	Royalty.	No.	Amount.	Royalty.	No.	Amount.	Royalty.
1905—June	267	$40 58	$12 82				268	$55 74	$19 30			
July	11,908	1,810 02	571 58				12,092	2,515 14	870 62			
August	20,441	3,107 03	981 17	29,438	$5,416 59	$1,648 52	20,624	4,289 79	1,484 93	28,612	$9,155 84	$2,861 20
September	10,390	1,579 28	498 72	9,594	1,765 30	537 26	11,224	2,334 59	808 12	14,896	4,766 72	1,489 60
October	957	145 49	45 93	654	120 34	36 62	913	189 90	65 74	1,431	457 92	143 10
November	539	81 93	25 87	174	32 01	9 75	705	146 64	50 76	703	224 96	70 30
December	1,429	217 21	68 59	886	163 02	49 62	1,268	263 74	91 30	1,952	626 64	195 20
Totals	45,664	$6,940 94	$2,191 86	40,746	$7,497 26	$2,281 77	46,826	$9,739 80	$3,371 43	47,594	$15,232 14	$4,759 40
1906—January	2,729	414 81	130 99	3,218	592 12	180 20	5,240	1,089 92	377 28	7,264	2,324 48	726 40
February	284	43 17	13 63	677	124 57	37 91	370	76 96	26 64	1,424	455 68	142 40
March	352	53 50	16 90	619	113 90	34 66	236	49 09	16 99	348	111 36	34 80
April	476	72 35	22 85	297	54 65	16 63	414	86 11	29 81	348	111 36	34 80
May	265	40 28	12 72	273	50 23	15 29	189	39 31	13 61	195	62 40	19 50
June	252	38 30	12 10	221	40 66	12 38	179	37 23	12 89	180	57 60	18 00
Totals	4,358	$662 41	$209 19	5,305	$976 13	$297 07	76,628	$1,378 62	$477 22	9,759	$3,122 88	$975 90

TEXT-BOOKS SOLD DURING FISCAL YEARS 1904-05 and 1905-06—Continued.

	Fourth Reader. Price, 49 Cents.			Grammar School History. Price, 81 Cents.			Introductory Geography. Price, 55 Cents.			Grammar School Geography. Price, 98 Cents.		
	No.	Amount.	Royalty.	No.	Amount.	Royalty.	No	Amount.	Royalty.	No.	Amount.	Royalty.
1904—July				5,224	$2,664 24	$1,567 20	11,451	$4,866 67½	$1,431 38½	10,867	$7,606 90	$3,042 76
August				6,100	3,111 00	1,830 00	19,645	8,349 13½	2,455 62½	15,667	10,966 90	4,386 76
September				4,687	2,390 37	1,406 10	15,571	6,617 67	1,946 38	13,065	9,145 50	3,658 20
October				1,524	777 24	457 20	9,457	4,019 22	1,182 13	5,659	3,961 30	1,584 52
November				173	88 23	51 90	1,296	550 80	162 00	767	536 90	214 76
December				1,049	534 99	314 70	2,941	1,249 93	367 62	1,729	1,210 30	484 12
Totals				18,757	$9,566 07	$5,627 10	60,361	$25,653 42	$7,545 13	47,754	$33,427 80	$13,371 12
1905—January				2,498	1,273 98	749 40	6,833	2,904 02	854 13	4,938	3,456 60	1,382 64
February				486	247 86	145 80	712	302 60	89 00	650	455 00	182 00
March				116	59 16	34 80	395	167 88	49 37	225	157 50	63 00
April				113	57 63	33 90	466	198 05	58 25	200	140 00	56 00
May				32	16 32	9 60	185	78 62	23 13	63	44 10	17 64
June				13	6 63	3 90	96	40 80	12 00	37	25 90	10 36
Totals				3,258	$1,651 58	$977 40	8,687	$3,691 97	$1,085 88	6,113	$4,299 10	$1,711 64
1905—July				3,106	1,584 06	931 80	4,936	2,097 80	617 00	3,195	2,236 50	894 60
August	24,019	$8,887 03	$2,882 28	7,354	3,750 54	2,206 20	10,679	4,538 57½	1,334 88½	7,696	5,387 20	2,154 88
September	14,708	5,441 96	1,764 96	3,490	1,779 90	1,047 00	7,735	3,287 38	966 87	6,134	4,293 80	1,717 52
October	1,752	648 24	210 24	359	183 09	107 70	791	336 18	98 87	600	420 00	168 00
November	1,160	429 20	139 20	184	93 84	55 20	323	137 28	40 37	259	181 30	72 52
December	1,642	607 54	197 04	392	199 92	117 60	781	331 93	97 62	892	624 40	249 76
Totals	43,281	$16,013 97	$5,193 72	14,885	$7,591 35	$4,465 50	25,225	$10,729 14	$3,145 61	18,776	$13,143 20	$5,257 28
1906—January	6,884	2,547 08	826 08	2,233	1,158 83	669 90	4,146	1,762 05	518 25	3,146	2,202 20	880 88
February	1,035	382 95	124 20	200	102 00	60 00	384	163 20	48 00	396	277 20	110 88
March	178	65 86	21 36	63	32 13	18 90	187	79 48	23 37	281	196 70	78 68
April	195	72 15	23 40	115	58 65	34 50	237	100 72	29 63	143	190 10	40 04
May	113	41 81	13 56	56	28 56	16 80	178	75 65	22 25	101	70 70	28 28
June	181	66 97	21 72	60	30 60	18 00	160	68 00	20 00	101	70 70	28 28
Totals	8,586	$3,176 82	$1,030 32	2,727	$1,390 77	$818 10	5,292	$2,249 10	$661 50	4,168	$2,917 60	$1,167 04

	Physiology. Price, 41 Cents.		Civil Government. Price, 46 Cents.		First Reader (Old Series). Price, 15 Cents.		Second Reader (Old Series). Price, 33 Cents.		Third Reader. (Old Series). Price, 40 Cents.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
1904—July	487	$243 50	383	$176 18						
August	1,473	736 50	690	317 40					135	$54 00
September	1,903	951 50	937	431 02					444	177 60
October	420	210 00	98	45 08					10	4 00
November	35	17 50	55	25 30						
December	213	106 50	148	68 08						
Totals	4,531	$2,265 50	2,311	$1,063 06					589	$235 60
1905—January	439	219 50	184	84 64						
February	67	33 50	12	5 52						
March	26	13 00	31	14 26						
April	85	42 50	12	5 52						
May	13	6 50	3	1 38						
June	4	2 00	3	1 38						
Totals	634	$317 00	245	$112 70						
1905—July	448	224 00	464	213 44						
August	1,850	925 00	365	167 90					170	68 00
September									150	60 00
October									30	12 00
November									8	3 20
December									10	4 00
Totals	2,298	$1,149 00	829	$381 34					368	$147 20
1906—January										
February									5	2 00
March									5	2 00
April										
May										
June										
Totals									10	$4 00

TEXT-BOOKS SOLD DURING FISCAL YEARS 1904-05 AND 1905-06—Continued.

	English Grammar (Old Series). Price, 42 Cents.		Elem'ry Geography (Old Series). Price, 50 Cents.		Advan'd Geography (Old Series). Price, $1.02.		History (Old Series). Price, 50 Cents.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
1904—July			5	$2 50				
August			30	15 00	26	$26 52		
September	1	$0 42	5	2 50	1	1 02		
October			3	1 50				
November	1	42			2	2 04		
December								
Totals	2	$0 84	43	$21 50	29	$29 58		
1905—January			2	1 00				
February							1	$0 50
March								
April	1	42						
May								
June								
Totals	1	$0 42	2	$1 00			1	$0 50
1905—July								
August	1	42						
September	10	4 20						
October			9	4 50				
November			3	1 50	1	1 02		
December								
Totals	11	$4 62	12	$6 00	1	$1 02		
1906—January					1	1 02	1	$0 50
February								
March								
April								
May								
June	1	42						
Totals	1	$0 42			1	$1 02	1	$0 50

	Primary Number Lessons. Price, 20 Cents.		First Book in Arithmetic. Price, 28 Cents.			Grammar School Arithmetic. Price, 50 Cents.			Lessons in Language. Price, 25 Cents.		Revised English Grammar. Price, 47 Cents.		Introductory History. Price, 45 Cents.		
	No.	Amount.	No.	Amount	Royalty.	No.	Amount.	Royalty.	No.	Amount.	No.	Amount.	No.	Amount.	Royalty.
1904—															
July	1,928	$385 60				12,665	$4,686 05	$1,646 45	3,897	$974 25	3,034	$1,425 98			
Aug.	1,980	396 00				25,340	9,375 80	3,294 20	3,494	873 50	4,038	1,897 86			
Sept.	1,851	370 20				22,600	8,362 00	2,938 00	4,030	1,007 50	3,788	1,780 36			
Oct.						12,257	4,535 09	1,593 41	690	172 50	914	429 58			
Nov.						2,398	887 26	311 74	258	64 50	132	62 04			
Dec.						4,630	1,713 10	601 90	931	232 75	805	378 35	8,962	$2,688 60	$1,344 30
Totals	5,759	$1,151 80				79,890	$29,559 30	$10,385 70	13,300	$3,325 00	12,711	$5,974 17	8,962	$2,688 60	$1,344 30
1905—															
Jan.						10,467	3,872 79	1,360 71	2,358	589 50	2,041	959 27	9,426	2,827 80	1,413 90
Feb.						1,848	683 76	240 24	149	37 25	179	84 13	691	207 30	103 65
Mar.						615	227 55	79 95	29	7 25	101	47 47	325	97 50	48 75
April						364	134 68	47 32			86	40 42	135	40 50	20 25
May						125	46 25	16 25			41	19 27	4	1 20	60
June						112	41 44	14 56			534	250 98	2	60	30
Totals						13,531	$5,006 47	$1,759 03	2,536	$634 00	2,982	$1,401 54	10,583	$3,174 90	$1,587 45
1905—															
July						4,544	1,681 28	590 72					2,389	716 70	358 35
Aug.						10,787	3,991 19	1,402 31					7,955	2,386 50	1,193 25
Sept.						9,030	3,341 10	1,173 90					6,028	1,808 40	904 20
Oct.						1,149	425 13	149 37					893	267 90	133 95
Nov.						476	176 12	61 88					278	83 40	41 70
Dec.			7,322	$1,537 62	$512 54	863	319 31	112 19					1,048	314 40	157 20
Totals			7,322	$1,537 62	$512 54	26,849	$9,934 13	$3,490 57					18,591	$5,577 30	$2,788 65
1906—															
Jan.			12,084	2,537 64	845 88	3,796	1,404 52	493 48					3,292	987 60	493 80
Feb.			2,591	544 11	181 37	379	140 23	49 27					364	109 20	54 60
Mar.			1,285	269 85	89 95	107	39 59	13 91					152	45 60	22 80
April			770	161 70	53 90	212	78 44	27 56					192	57 60	28 80
May			223	46 83	15 61	159	58 83	20 67					134	40 20	20 10
June			290	60 90	20 30	152	56 24	19 76					116	34 80	17 40
Totals			17,243	$3,621 03	$1,207 01	4,805	$1,777 85	$624 65					4,250	$1,275 00	$637 50

Total Number of State Text-Books Sold from July 1, 1904, to June 30, 1906, and the Total Amount of Money Paid Into State Treasury from Such Sales.

Name of Book.	Price of Books.	Number Sold.		Amount of Sales.	
		1904-1905.	1905-1906.	1904-1905.	1905-1906.
Third Reader (old series)	$0.40	589	378	$235 60	$151 20
First Reader (revised)	.16	28,480	1,236	4,556 80	197 76
Second Reader (revised)	.28	21,078	2	5,901 84	56
Third Reader (revised)	.44	19,965	466	8,784 60	205 04
Fourth Reader (revised)	.53	12,907	746	6,840 71	395 38
Primer (new)	.20	267	50,022	53 40	10,004 40
First Reader (new)	.24		46,051		11,052 24
Second Reader (new)	.28	268	53,454	75 04	14,967 12
Third Reader (new)	.42		57,353		24,088 26
Fourth Reader (new)	.49		51,867		25,414 83
Speller (old)	.19	21,200	22,915	4,028 00	4,353 85
Primary Number Lessons (old)	.20	5,759		1,151 80	
First Book in Arithmetic (new)	.28		24,565		6,878 20
Gram. School Arithmetic (new)	.50	93,421	31,654	46,710 50	15,827 00
Old English Grammar	.42	3	12	1 26	5 04
Lessons in Language (old)	.25	15,836		3,959 00	
Revised English Grammar (old)	.47	15,693	9,934	7,375 71	4,668 98
English Lessons, Book I	.28		1,184		331 52
English Lessons, Book II (new)	.46		1,152		529 92
History (old series)	.50	1	1	50	50
Introductory History (new)	.45	19,545	22,841	8,795 25	10,278 45
Grammar School History (new)	.81	22,015	17,612	17,832 15	14,265 72
Elementary Geography (old)	.50	15	12	7 50	6 00
Advanced Geography (old)	1.02	4	2	4 08	2 04
Introductory Geography (new)	.55	69,048	30,537	37,967 40	16,795 35
Grammar School Geog. (new)	.98	53,867	22,944	52,789 66	22,485 12
Physiology (old)	.50	5,165	2,298	2,582 50	1,149 00
Civil Government (old)	.46	2,556	829	1,175 76	381 34
Totals		407,682	450,067	$210,838 06	$184,434 82

ollowing table shows the number and value of printed books on ıne 30, 1906, according to the records of the State Printing Office:

Name of Book.	Number of Books.	Value.
ıew)	23,840	$4,768 00
ıder (new)	29,821	7,157 04
:eader (new)	27,993	7,838 04
ader (new)	32,228	13,535 76
:eader (new)	27,143	13,300 07
	5,997	1,139 43
›k in Arithmetic (new)	24,098	6,747 44
r School Arithmetic	18,552	9,276 00
Lessons, Book I	28,776	8,057 28
Lessons, Book II	28,183	12,964 18
tory History	32,570	14,656 50
r School History United States	17,138	13,881 78
tory Geography	20,987	11,542 85
r School Geography	18,156	17,792 88
ł Reader	383	153 20
First Reader	153	24 48
Third Reader	79	34 76
Fourth Reader	271	143 63
	336,368	$143,013 32

SUMMARY OF STATISTICS.

HIGH SCHOOLS.

	1905.	1906.
Number of counties maintaining	49	51
High School districts—		
County	20	15
City	32	39
District	34	33
Union	78	84
Joint Union	10	12
Total, deducting half the joint districts	169	183
Number of teachers employed—		
Regular—Men	397	435
Women	573	668
Special—Men	10	10
Women	17	24
Total	997	1,137
Number of pupils enrolled—		
First year—Boys	5,043	5,987
Girls	6,005	7,140
Second year—Boys	2,741	3,173
Girls	3,758	4,006
Third year—Boys	1,662	1,912
Girls	2,284	2,557
Fourth year—Boys	1,079	1,302
Girls	1,681	1,999
Total—Boys	10,525	12,374
Girls	13,728	15,701
Total enrollment	24,253	28,075
Average daily attendance	19,016	21,397
Number of graduates during year—		
Boys	1,007	1,078
Girls	1,584	1,735
Total	2,591	2,813
Average number of days school was maintained	189	187
Number of teachers attending institute	969	1,089
Number of volumes in high school libraries	112,739	126,436
Financial Statement.		
Receipts—		
Balance on hand	$400,283 95	$614,944 30
From State fund	255,248 56	210,570 20
From taxes of all kinds	1,652,764 13	2,294,341 06
From donations, etc.	64,811 63	45,374 99
Total receipts	$2,373,108 27	$3,165,230 55

HIGH SCHOOLS—Continued.

	1905.	1906.
Financial Statement—Continued.		
Expenditures—		
For teachers' salaries	$1,114,782 47	$1,251,949 53
For current expense, supplies, etc.	303,140 15	318,104 16
For buildings	339,532 10	506,593 06
For books and apparatus	28,423 13	42,202 40
Total expenditures	$1,785,877 85	$2,118,849 15
Balance on hand at close of year	$587,230 42	$1,046,381 40
Valuation of Property.		
Buildings and furniture, including sites	$3,763,069 00	$4,736,715 00
Laboratories	166,565 00	217,673 00
Libraries	119,891 00	138,626 00
Total valuation of all property	$4,049,525 00	$5,093,014 00
Aggregate monthly salary paid all High School teachers	$107,653 23	$129,596 80

STATE NORMAL SCHOOLS.

Number of State Normal Schools	5	5
Number of teachers employed—		
Men	36	37
Women	72	77
Total	108	114
Number of students enrolled in Normal Department—		
Boys	133	149
Girls	1,670	1,875
Total	1,803	2,024
Number of students enrolled in Training Department—		
Boys	803	763
Girls	887	969
Total	1,690	1,732
Number of graduates since the establishment of the first State Normal School—		
Men		724
Women		6,218
Total		6,942
Number of graduates who are teaching in the schools of the State—		
Chico	292	343
Los Angeles	717	834
San Diego	138	188
San Francisco	226	248
San José	1,367	1,478
Total	2,740	3,091
Receipts— *Financial Statement.*		
Balance on hand at the beginning of year to the credit of State Normal Schools—	$60,098 20	$8,180 00
From State appropriation	199,300 00	418,100 00
From tuition in Training Department	4,474 19	3,136 13
Total receipts	$261,872 39	$429,416 13

STATE NORMAL SCHOOLS—Continued.

	1905.	1906.
Financial Statement—Continued.		
Expenditures—		
Teachers' salaries	$163,821 35	$166,841 93
Janitors, gardeners, librarians, supplies, etc.	30,749 87	33,508 43
Buildings and furniture	52,122 31	111,856 38
Books and apparatus	6,106 45	3,921 10
Total expenditures	$252,799 98	$316,127 84
Balance on hand June 30th	$9,072 41	$113,288 29
Valuation of Property.		
Grounds	$331,000 00	$388,000 00
Buildings	650,774 00	531,790 00
Furniture	35,289 66	34,834 48
Libraries	40,558 54	38,367 53
Apparatus	24,506 86	24,203 09
Total	$1,082,129 06	$1,017,195 10
Libraries.		
Number of volumes at beginning of year	43,217	47,034
Number of volumes bought or donated	4,218	6,667
Number of volumes lost or worn out	401	8,630
Total number of volumes in libraries at close of year, June 30th	47,034	45,071

PRIMARY AND GRAMMAR SCHOOLS.

CENSUS STATISTICS.			
Number of families listed		222,631	239,899
Number of children between 5 and 17 years of age—			
White—	Boys	207,154	217,341
	Girls	201,896	212,664
	Total	409,050	430,005
Negro—	Boys	1,600	1,644
	Girls	1,626	1,673
	Total	3,226	3,317
Indian—	Boys	1,764	1,703
	Girls	1,628	1,668
	Total	3,392	3,371
Mongolian—	Boys	2,341	2,516
	Girls	1,306	1,708
	Total	3,647	4,224
Total number of school census children		419,315	440,917
Number of children between 5 and 17 years of age attending—			
Public schools		305,810	321,870
Private schools		42,092	43,080
No school (including a number who are 5 but not 6 years of age)		71,413	75,967
Total		419,315	440,917
Number of children under 5 years of age—			
White		123,734	132,550
Negro		777	1,277
Indian		1,183	1,179
Mongolian		606	2,003
Total		126,300	137,009

PRIMARY AND GRAMMAR SCHOOLS—Continued.

	1905.	1906.
CENSUS STATISTICS—*Continued.*		
Nativity of all children—		
Native born	535,217	565,018
Foreign born	10,398	12,908
Total	545,615	577,926
Total number of children over 5 but not over 17 years of age who are deaf	392	437
Number of children over 5 but not over 17 years of age who have not been vaccinated	114,639	123,210
SCHOOL STATISTICS.		
Number of school districts at beginning of year	3,216	3,209
Number new districts organized	50	42
Number of districts lapsed during year	34	17
Number of districts combined	9	7
Total at close of year	3,223	3,227
Number of school houses—		
Brick	162	165
Stone	6	8
Adobe	8	10
Wood	3,694	3,642
Total	3,860	3,825
Grade of schools—		
Primary	2,287	3,814
Grammar	3,526	2,221
Number of teachers, including principals—		
Men	905	887
Women	6,979	7,195
Total	7,884	8,082
Grade of teachers' certificates in Primary and Grammar Schools—		
High School	462	467
Grammar School	7,017	7,253
Primary	270	203
Special	135	159
Total	7,884	8,082
Enrollment in schools—		
Primary grades— Boys	97,575	96,230
Girls	86,861	90,218
Grammar grades—Boys	50,406	51,444
Girls	50,822	57,047
Total— Boys	147,981	147,674
Girls	137,683	147,265
Total boys and girls	285,664	294,959
Average number of pupils belonging to school	230,951	237,295
Average daily attendance	217,873	224,660
Average percentage of attendance	94	95
Number of districts maintaining school—		
Less than 120 days for year	14	23
120 days and less than 160	582	384
160 days and *less than 200*	2,349	2,478
200 days or over	266	335
Total	3,211	3,200

GENERAL STATISTICS.

	1905.	1906.
Number of teachers who are graduates of California State Normal Schools—		
Chico	292	343
Los Angeles	717	834
San Diego	138	188
San Francisco	226	248
San José	1,367	1,478
Total	2,740	3,091
Number of teachers who are graduates of Normal Schools on the accredited list of State Board of Education	444	558
Number of teachers who are graduates of universities—		
California	664	704
Stanford	316	341
Those on accredited list of State Board of Education	151	179
Number of pupils graduating from Grammar Schools—		
Boys	4,507	5,354
Girls	5,703	7,260
Total	10,210	12,614
Number of pupils graduating from High Schools—		
Boys	1,007	1,078
Girls	1,584	1,735
Total	2,591	2,813
Average cost per pupil per annum enrolled in—		
Grammar Schools	$23 16	$26 75
High Schools	59 22	71 95

Number of pupils graduating from California High Schools for year closing June 30, 1905, who entered higher institutions of learning during year closing June 30, 1906—	Boys.	Girls.	Total.
State Normal Schools –			
Chico	1	6	7
Los Angeles	0	54	54
San Diego	0	18	18
San Francisco	0	84	84
San José	5	134	139
Total	6	296	302
University of California—			
Berkeley (proper)	256	233	489
Hastings Law School. (No report.)			
Dental College	26	0	26
Total	282	233	515
Stanford University	197	94	291

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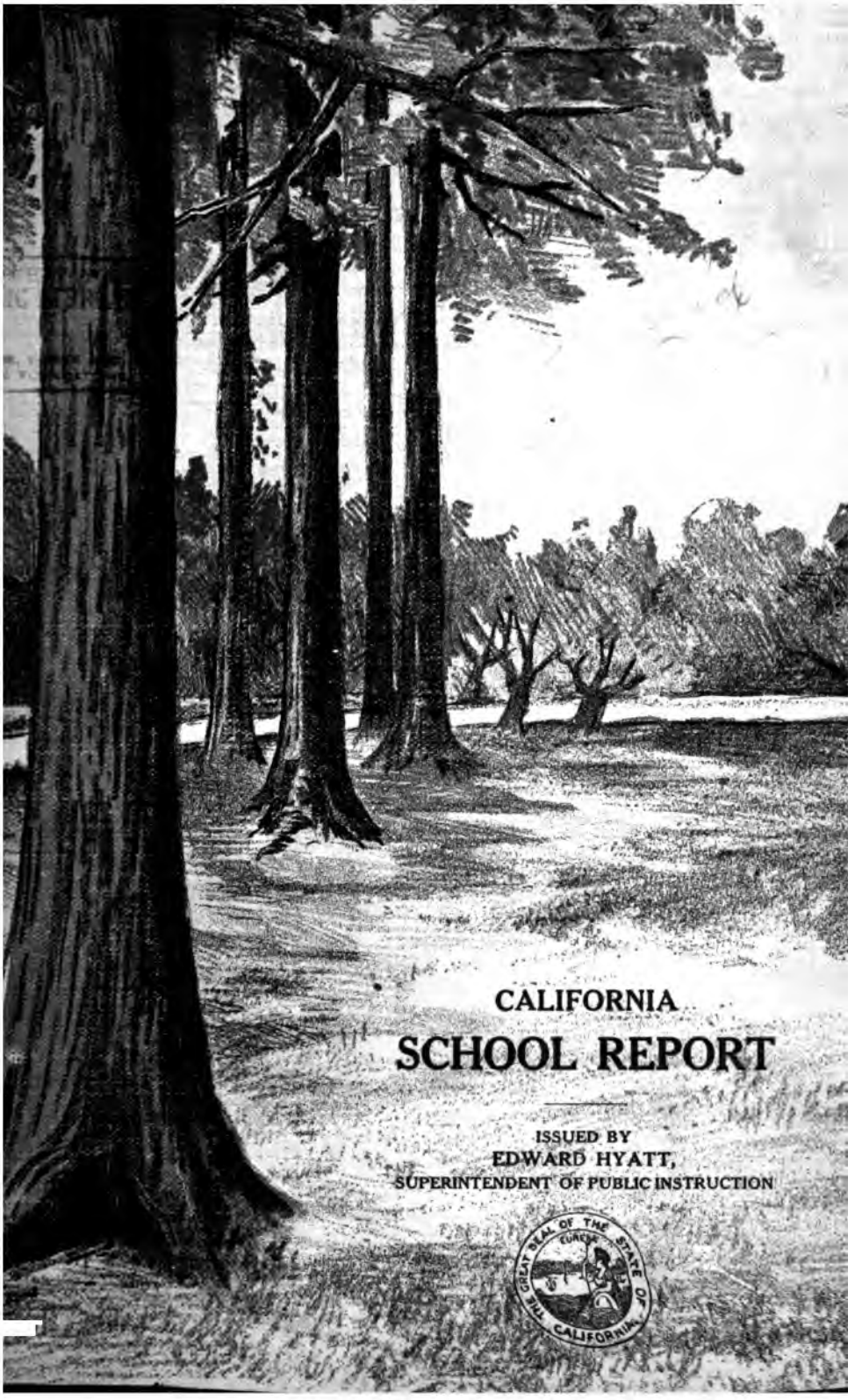


CALIFORNIA
SCHOOL REPORT

ISSUED BY
EDWARD HYATT,
SUPERINTENDENT OF PUBLIC INSTRUCTION

STATE OF CALIFORNIA,

OFFICE SUPERINTENDENT OF PUBLIC INSTRUCTION.

TWENTY-THIRD BIENNIAL REPORT

OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION

FOR THE

School Years Ending June 30, 1907, and June 30, 1908

TRANSMITTED TO THE GOVERNOR SEPTEMBER 15, 1908

SACRAMENTO:

W. W. SHANNON, : : : : : : SUPERINTENDENT STATE PRINTING

1909.

LETTER OF TRANSMITTAL.

SACRAMENTO, CALIFORNIA, Sept. 15, 1908.

To His Excellency, JAMES N. GILLETT,
Governor of California.

SIR: I have the honor to transmit herewith the Twenty-third Biennial Report of the Superintendent of Public Instruction, with the request that it be printed and distributed among the people concerned in public education throughout the State.

You will observe that the plan and scope of the Report have been greatly changed. It has been customary in such documents to present a mass of detailed statistical matter together with certain technical statements from some of our educational institutions.

The Idea of the change is to condense and summarize this formal material so as to make room for something that will be of use and interest to all the school people of the State, rather than to a few investigators alone; something that will be readable and digestible, and that will bring directly home to the children, the teachers, and the school officers of California some of the great educational movements that should be seeping into the hearts and consciences of the People—to the future power and safety of the State.

Surely the Conservation of Resources, the Building of Schools and the Planting of Trees are such movements.

I trust this change of plan may appeal to your good judgment and be worthy of your kind approval.

I am, sir, very respectfully,

Your obedient servant,

EDWARD HYATT,
Superintendent of Public Instruction.

STATE OF CALIFORNIA

OFFICE SUPERINTENDENT OF PUBLIC INSTRUCTION

CONSERVATION

OF

NATURAL RESOURCES

It is safe to say that the prosperity of our people depends directly on the energy and intelligence with which our natural resources are used. It is equally clear that these resources are the final basis of natural power and perpetuity. Finally, it is ominously evident that these resources are in the course of rapid exhaustion.

FROM THE

TWENTY-THIRD BIENNIAL REPORT

OF

EDWARD HYATT

SUPERINTENDENT OF PUBLIC INSTRUCTION

SACRAMENTO, CALIFORNIA

1909

PRINTED AT THE STATE PRINTING OFFICE
W. W. SHANNON, SUPERINTENDENT.

)NSERVATION OF NATURAL RESOURCES.

Introductory by the Superintendent of Public Instruction.

WORD TO THE PEOPLE OF CALIFORNIA.

My friends, during the past year I have become possessed by the idea that the largest, the most truly patriotic, the most vitally important movement in this nation to-day is the one looking to the Conservation of our Natural Resources. This has been large enough to call together a Conference of Governors, to cause the appointment of a National Commission, and to engage the earnest attention, the gravest concern of the greatest and most brilliant minds of our continent. It is patriotic, for it looks to the preservation of our fatherland into the future with its power and glory undimmed. lly important, for without it our nation is doomed to go down :y and weakness. It is unselfish, for it looks forward to the)f those who come after us, rather than for our own little per- efit now. It is a vital and a worthy thing, however we view it. become possessed by the idea, too, that it is highly important *chool people* of this State to join in this movement; for them its significance, appreciate its momentum, take hold of it and intelligently. Such a movement as this must fail unless projected into the future. It can only be projected into the irough the *children* of the nation. If it would really get per- into the hearts of the People, it must filter through the

eive it to be a patriotic duty resting upon every teacher, every endent, every school officer, to take his share of responsibility hing; to read, to talk, to think, to inform himself about this vement for Conservation—and then to pass the spirit of it all the Children. In no other state or country is such variety and natural resources to be found as in California. Nowhere else g squandered with such careless hand, nor is there elsewhere ssity for wise and thoughtful and far-seeing School People.

These reasons impel me to collect from letters, talks, newspapers, magazines, this little handbook of Conservation. It is meant to be read. It is meant to give a notion of what people are thinking and saying about the subject. It is meant to attract the attention of the school people of California, to give them some means for measuring the importance of the movement, some materials for shaping the sentiments of themselves and their children. It is only a start. I hope it can be accepted as a start in the right direction, and that it may lead toward good citizenship and the general weal.

Very truly yours,

EDWARD HYATT.

THE CASE OUTLINED.

hat Does It Mean?

Just what does it mean—this Conservation of Natural Resources? hy, it means simply the wise care and use of our forests, our mines, ır water, our soil. These are the fundamental sources of wealth that ve been given to us by nature.

hy Are We Great?

Why is our nation one of the greatest in all the world? Is it because are stronger people, better people than the rest of the world? Not all. It all rests upon the wonderful, the amazing natural resources North America. The great fortunes, the great cities, the great hievements of this nation, past and future, all depend upon our tural resources.

here Does Our Money Come From?

Whence comes the money of the thousands of rich Americans who all Europe agape? Whence come the funds to construct the great y-scrapers, to rebuild ruined cities, to make fleets of warships, trans-atinental railroads, interoceanic canals and the other titanic under-tings that we are continually carrying out?

om Our Natural Storehouses.

It all comes from American copper, or wheat or lumber or coal or or gas or iron; or from the railroads or ships hauling these things; from trading with the people who work in these things; or from the lities of the cities that grow upon these things. Everything in all r power and civilization and luxury goes straight back to our natural rehouses of wealth. And we got them so easily that we do not even preciate them as yet.

pose They Were Gone?

But suppose these storehouses were gone, or nearly empty? What uld American enterprise amount to if it had nothing to exploit? at figure does a poverty-stricken nation cut in the world? What h and populous nations in history have not gone down into groveling ignificance by squandering their natural resources?

thinking Babes.

Up to date we have been careless, heedless children with all our ources, giving them away, destroying them, wasting them with lavish ads, and with no *thought of the* morrow. He who can destroy most

of our public property in the shortest time most excites our childish admiration. We have been busily playing our little games, paying no attention while some of the boys have set the house afire.

Something Is Doing.

But now an awakening seems to be coming. Its first tangible appearance was a Conference of Governors of the states and territories of the United States at the White House in Washington, presided over by President Roosevelt. Very many of the wisest and ablest men of the United States took part in this Conference—statesmen, philosophers, captains of industry. The Conference was followed in June by the formation of a National Conservation Commission of forty-eight members, appointed by the President.

The General Plan.

This National Commission is now at work. It is the plan that many commissions and associations throughout the states of the Union shall be formed to work with it, either upon Conservation as a whole or upon some phase of the subject vital to the particular locality. The results of this work are to be reported from time to time to the state legislatures and to the United States Congress; and made the basis for a wide and harmonious system of laws governing our Natural Resources.

But this wise and patriotic plan will fall down utterly, will come to naught, will turn to ashes in our grasp—*unless it can be backed up, supported, urged on by a strong, stern, unsleeping Public Opinion.*

Therefore It Is.

Therefore it is that the matter must be carried to the people, to the teachers, to the children. They must learn the facts and form their sentiments and see their duty. Commissions and legislatures will accomplish nothing unless we can wake the patriotic spirit of the people. The movement for Conservation can go no further than public opinion will carry it; but it will go fully as far as public opinion will go. [E. H.]

Aristotle says, "All who have meditated on the art of governing mankind have been convinced that the fate of empires depends on the education of youth."

THE NATIONAL CONSERVATION COMMISSION.

This body is composed of forty-eight eminent men of the United tes. California is represented by Senator Frank P. Flint and -Governor Pardee. Others are familiar names, as Senator Burton Ohio, Dolliver of Iowa, Beveridge of Indiana, Champ Clark of ssouri, Nelson of Minnesota, John Mitchell, Andrew Carnegie, Presit Van Hise, John Hays Hammond. The headquarters is at Washton. The President and the Secretary have examined the plan and rpose of these pages and have expressed approving sentiments in following letters:

WASHINGTON, Nov. 6, 1908.

the Superintendent of Public Instruction,
Sacramento, California.

dear sir:

I hasten to express my gratification over e excellent way in which you have worked t your idea of devoting a part of your ennial Report to Conservation. It is oroughly admirable, and I am sure will do great deal toward making the volume a very fective agency for good. You have discoved a new, and, I am convinced, extremely werful channel for the advancement of the vement. I congratulate you upon having rceived this opportunity to promote educaon, and again congratulate you on being le so effectively to put your idea into ecution. I shall appreciate any opportuty to assist you in the project.

Very truly yours,

GIFFORD PINCHOT,
Chairman.

WASHINGTON, Dec. 18, 1908.

The Supt. of Public Instruction,
Sacramento, Cal.

My dear sir:

You are the first State officer, of whom I have any knowledge, to take up Conservation in the way you propose to treat it, in your Report. I believe that your action will be the opening wedge in this great movement among the teachers of the whole country. I congratulate you on your conception of the idea, and I hope you will feel perfectly free to call upon the Commission for any additional assistance which you may desire. Will you not kindly keep me in touch with the progress of your Report, and believe me,

Very sincerely yours,

THOMAS R. SHIPP,
Secretary.

WHAT PEOPLE ARE THINKING.

THIS movement is so new that many of us do not yet appreciate its momentum. Most of us never even heard of it until within the last few months. Nothing can give us a better idea of it, perhaps, and nothing can be more interesting than to see what other people are really thinking and saying about it; particularly so if the other people are ones we respect or ones who have had unusual opportunity to know what they are talking about. With this in view the following expressions of individual opinion have been collected.

These can be used by a clever teacher in many ways. For instance, in the morning exercises, one can be read aloud by a pupil, or explained by the teacher. Another may be given as a declamation or a reading at some entertainment or patriotic celebration. Still another, perhaps, will yield quotations and strong points for debates, essays and other similar school activities.

Of course, if the spirit does not move the teacher to *use* these things, they all fall flat. But California teachers never lack for spirit.

A bit of our forest.

The President of the United States.

"The necessity for a comprehensive and systematic improvement of our waterways, the preservation of our soil and of our forests, the securing from private appropriation the power in navigable streams, the retention of the undisposed of coal lands of the Government from alienation, all will properly claim from the next Administration earnest attention and appropriate legislation.

Without the resources which make labor productive, American enterprise, energy, and skill would not in the past have been able to make headway against hard conditions. Our children and their children will not be able to make headway if we leave to them an impoverished country. Our land, our waters, our forests, and our minerals are the sources from which come directly or indirectly the livelihood of all of us. The conservation of our natural resources is a question of fundamental importance to the United States now.

The truth is that the overwhelming necessity for our doing something to conserve our natural resources is going to put us to a new test of the practical character of our system of government. It is going to involve the question of whether, with the changing conditions, with the closer relations and the interdependence of the various parts of this country, our National Constitution will furnish the means of meeting that necessity. Now, I have no doubt that it will."

WM. H. TAFT.

A Famous Churchman.

"No policy of our National Government is more in keeping with those democratic principles upon which our Republic is founded than the conservation of our natural resources, and none is to have a greater influence upon the future prosperity of our land. Our fertile soils, our inland waters, our mines, and our forests are God-given heritages which belong no more to the present generation than to generations that are to come. It is our duty as American citizens to regard these resources as sacred trusts, to preserve them, and to use them wisely and with moderation, that we may, as far as possible, provide against the days of want that are surely approaching; and that when these days are at hand they may not come as a crushing retribution, but as a wholesome discipline by which we shall be taught the great lessons of thrift and foresight."

CARDINAL GIBBONS.

The Great Commoner.

"It should be our purpose, not only to preserve the nation's resources for future generations by reducing waste to a minimum; we should see to it that a few of the people do not monopolize that which in equity is the property of all the people. The earth belongs to each generation.

and it is as criminal to fetter future generations with perpetual franchises, making the multitude servants to a favored faction of the population, as it would be to impair, unnecessarily, the common store.

Money spent in care for the life and health of the people, in protecting the soil from erosion and from exhaustion, in preventing waste in the use of minerals of limited supply, in the reclamation of deserts and swamps, and in the preservation of forests still remaining and the planting of denuded tracts—money invested in these and in the development of waterways and in the deepening of harbors is an investment yielding an annual return. If any of these expenditures fail to bring a return at once the money expended is like a bequest to those who come after us. And as the parent lives for his child as well as for himself, so the good citizen provides for the future as well as for the present."

WILLIAM JENNINGS BRYAN.

The President of the University of California.

"This small revolving globe we dwell upon has been used as a home by us humans, by us and our ancestors, for a goodly row of centuries. But we were too few and weak to master it and put it clean beneath our feet. It mostly got the best of us. Of late we have come to get the best of it. It used to thwart us, and steer us, and tell us what we must do. Now we tell it what we want to do, and make it do it for us. We have fettered its strengths with steel and made them work for us. We force its down-hill waters to carry us up hill. We use its own treasures of fuel to belittle its size and dignity; to curb it and humble it, and even to reshape it.

This is all very well, but of late men have been finding this robbing and humiliating of the prostrate body of nature so easy and so interesting as to make it a form of sport. They rob and exploit without reference to any present need, just to show what they can do. It is like the killing of the buffaloes for the fun of shooting, until all at once it appeared they were practically exterminated.

This generation will have for one thing at least a great name in history. Men of the future centuries will surely call it the generation of the great destroyers, and historians and economists will write of the riotous days of nineteen hundred, when the people used up all the petroleum, all the natural gas, all the anthracite and most of the other coal, and most of the handy iron. It will be the period when the forests were cut down or burnt up, the lands stolen, and the waters given away. We are sure to be the subject of earnest remark."

BENJAMIN IDE WHEELER.

The Secretary of the Interior.

"Why should a great resource, which is owned by the people at large, be used by private interests, by somebody that is looking only to his own benefit, and not to the benefit of the people of the country? The people as a whole own these natural resources. They are not divided. But the people as a whole, as I say, own them, and it is for them to determine whether those resources shall be used for the benefit of all, or shall be turned over to be used unregulated for the benefit of those who may perchance first get a foothold in any special locality. In any law that is passed, in any theory of disposition that is adopted, we must look not only to their conservation and use, but we must look to the prevention of their monopolization in the hands of a few favored interests."

JAMES R. GARFIELD.

A Great Labor Leader.

"In our mad rush for spoils and profits we not only waste and destroy those material resources with which God has so bountifully endowed us, but we press forward in the race, sacrificing, unnecessarily, the lives and the comfort of our fellow-beings. It seems to me that the time has come when we should stop for a moment and think—not alone of those inanimate things that make for comfort and prosperity, but also of the men, and the women, and the children, whose toil and deprivation have made and will continue to make our country and our people the most progressive and the most intelligent of all the nations and of all the peoples of the earth."

JOHN MITCHELL.

A California College President.

"The greatest results of the administration of President Roosevelt have been twofold: the awakening of the civic conscience in our country, and the movement towards the conservation of our natural resources. These two results are closely connected, and each movement strengthens the other. There is now nothing in American politics of greater practical importance than the preservation of our national domain, with all that it contains, and all this developed to the highest point of efficiency.

Of these elements, that of forest preservation now stands first in pressing importance and deserves the constant support of all good men. Very important is also the preservation of the birds, to which the Audubon societies are dedicated. The saving of the fisheries is likewise a matter of large moment to the future and in this I am giving personally all the help I can.

As for the waters, soils and all such matters, our many centers of investigation and instruction in agriculture are giving splendid pledges for the future."

DAVID STARR JORDAN.

The Ex-President of the United States.

"In utilizing and conserving the natural resources of the nation the one characteristic more essential than any other is foresight. Unfortunately, foresight is not usually characteristic of a young and vigorous people, and it is obviously not a marked characteristic of us in the United States. Yet assuredly it should be the growing nation with a future which takes the long look ahead; and no other nation is growing so rapidly as ours or has a future so full of promise. No other nation enjoys so wonderful a measure of present prosperity which can of right be treated as an earnest of future success, and in no other are the rewards of foresight so great, so certain, and so easily foretold. Yet hitherto as a nation we have tended to live with an eye single to the present, and have permitted the reckless waste and destruction of much of our natural wealth.

The conservation of our natural resources and their proper use constitute the fundamental problem which underlies almost every other problem of our national life. Unless we maintain an adequate material basis for our civilization, we can not maintain the institutions in which we take so great and just a pride; and to waste and destroy our natural resources means to undermine this material basis."

THEODORE ROOSEVELT.

A Famous Ex-President.

"Those most proudly happy in their sanguine Americanism, and most confident of our ability to accomplish all things, must confess that our national life has been habitually beset with careless wastefulness, and that a palpable manifestation of this wastefulness is seen in the destruction of tree growth and the denudation of watersheds on our Western lands. Laws passed with the professed intent of protecting our forests have been so amiably construed as to admit of easy invasion; and their execution has too often been lax and perfunctory. In the mean time, public opinion on this subject, which might be as effective as legal enactment, has comfortably slumbered.

Even if we now abjectly repent of our sins of omission and commission in our treatment of the forests and streams which nature has given us, and reproach ourselves for the neglect of a trust imposed on us for the benefit of future generations, we must at the same time humbly confess that the punishment we have suffered by flood, by drought, by tornado, by fire, by barrenness of soil, and by loss of timber value, is well deserved.

In these circumstances it is exceedingly gratifying to have an appropriate opportunity to congratulate those who have constantly labored in the cause of forestry and forest preservation, as well as those interested in the cognate subject of irrigation, upon the prospect that these topics are *to have more* prominent places in governmental care.

Through the teachings of intelligent forestry it has been made plain that in our Western localities ruinous floods and exhausting droughts can be largely prevented, and productive moisture in useful degree and at needed periods secured, by a reasonable and discriminating preservation of our forest areas; the advocates of irrigation have been led to realize that it is useless to provide for the storage of water unless the sources of its supply are protected; and all those who, in a distinterested way, have examined these questions concede that tree growth and natural soil on our watersheds are more valuable to the masses of our people than the footprints of sheep or cattle.

The opportune time has arrived when effective public interest in forestry and forest preservation should be persistently aroused and stimulated."

GROVER CLEVELAND in 1904.

A Famous Mining Engineer.

"The ever-increasing rapidity of exploitation consequent upon the exigencies of modern engineering and economic practice inevitably leads to an alarming diminution of the lives—if I may use that term—of our mineral products. The culmination of our mining industry is to be reckoned by decades, and its declension (if not practically its economic exhaustion) in generations, not in centuries."

JOHN HAYS HAMMOND.

An American Political Economist.

"If we want to prolong American prosperity and maintain the high level of American wages, our wage being double that of the other nations of the earth, we must protect our facilities and enlarge our ability to produce and manufacture the things that we manufacture at the lowest cost. * * * If we had no advantage in the marketing of our goods, either in excellence or quantity or cheapness of production, it simply would mean that American labor would be reduced to the labor of all other nations of the world, and if we want to maintain its high level we must protect the facilities that will enable us to produce our goods at the very lowest possible cost."

WILLIAM S. HARVEY.

The State Geologist of West Virginia.

"Just as sure as the sun shines, and the sum of two and two is four, unless this insane riot of destruction and waste of our fuel resources which has characterized the past century shall be speedily ended, our industrial power and supremacy will, after a meteor-like existence, revert, before the close of the present century, to those nations that conserve and prize at their proper value their priceless treasures of *carbon*."

I. C. WHITE.

A Captain of the Steel Industry.

"We are nationally in the position of a large family receiving a rich patrimony from thrifty parents deceased intestate. * * * Now, the first duty of such a family is to take stock of its patrimony; the next to manage the assets in such manner that none shall be wasted, that all be put to the greatest good of the living and their descendants."

ANDREW CARNEGIE.

The Governor of California.

"Certainly this great nation must conserve the foundations of its prosperity if it would continue great. And certainly no state is more interested in the matter than California. Resources of every kind have been richly given to us—great forests, splendid soils, plentiful waters, valuable mines. It is no more than ordinary business prudence for us to take stock of our inheritances and find out the best way to handle them in future. Our children have a right to demand that we pass this great property on to them unimpaired, so that they and their children's children may continue to live and to prosper."

J. N. GILLETT.

The Governor of Utah.

"The great, broad principle underlying the subject of conservation is whether or not each succeeding generation can be sustained on the land without impoverishing it in any respect. Stated as a question it is, 'Will each generation have the land as rich as the preceding one?' It seems a simple question, and yet the safety and the lives of our children and our children's children will depend upon the answer. The forests, the streams, the soil, the minerals, and all the other natural elements of wealth should remain as nearly as possible undiminished as the centuries pass. All of this is in the hands of the people, with the possible exception of the preservation of the mineral wealth."

CUTTER.

The Governor of New Jersey.

"A lumber famine is dangerously near. Steep mountain sides are deforested for a few poor years of farming, and then abandoned, and their native fertility goes to choke the rivers and form bars in every harbor along the coast. The streams themselves become inactive and a large part of their power is wasted. The ills that come from this condition can be remedied by Government action alone, but that action must be taken now or we shall be staggered by the cost."

STOKES.

The Governor of Oregon.

"The conservation of the water supply is absolutely dependent upon the preservation of the upland forests. Opposition to the policy comes not from those interested in the development of the country and the

perpetuation of our institutions, but from the predatory classes, who care for naught but temporary gain."

CHAMBERLAIN.

The Governor of Idaho.

"We have built here a great nation, without a thought of to-morrow. We will grow still greater, even if we follow the same old methods that we have followed in the past. But we can not reach our full share of greatness as a nation unless, before it is too late, we throw safeguards around those resources that have made us the mightiest nation on the earth, so that they can be preserved and protected, that they may be developed to the greatest extent for the benefit of this and future generations."

GOODING.

The Governor of New York.

"The question of preserving our forests is of vital importance, and I am most anxious that all proper measures to this end shall be taken. * * * I am in hearty sympathy with the object."

HUGHES.

Wasteful lumbering. Wreckage of a Western forest after logging. The fire has already begun on it. What a boon a few square feet of this ground would be even now to many a family. The time is coming when every splinter of it will be keenly needed; its waste bitterly regretted. Millions upon millions of acres like this go up in smoke.

The Governor of Massachusetts.

"Not merely the lumber supply, but water power and water supply are alike vitally connected with this movement, and no State can afford to ignore it." * * *

GUILD.

The Governor of West Virginia.

"The matter is of such urgent importance that it can not be further delayed without great detriment to the best interest of the country."

SWANSON.

The Governor of Connecticut.

"I believe that we of the present generation owe it to posterity to conserve our natural resources in this direction."

WOODRUFF.

The Governor of Maryland.

"There is to my mind no waste of resources more appalling than the destruction of our forest wealth—wealth that came to us by inheritance with the soil."

WARFIELD.

The Governor of Virginia.

"Not only are we wasting our forests, but most of our other natural resources as well. But forest preservation seems to be of first importance—indeed, it is a subject of pressing importance."

DAWSON.

SOME CURRENT LITERATURE.

THE following longer selections from magazines, addresses, newspaper articles, will give more complete and well rounded views of the conservation idea as a whole. Why would not this collection be just the thing for a reading circle or an improvement club to use? It is up to date, interesting, and vital to our State, to our Nation. The material has not before been brought together. It has cost a good deal of labor.

Is it not strange that our schools, preparing for citizenship, do not take up in some way this Conservation of Resources, so vital to every one of us, so necessary to the very existence of the nation?

Our boys and girls spend hours and days and weeks in studying intently the virtues and the defects of the Articles of Confederation, dead a hundred years! But they can not discover in their school that men are throwing away and giving away the land and the water upon which the real life of the nation is builded.

They toil and moil at length over the animosities of the Civil War, which were better forgotten; but they do not learn that their birthrights of soil are being swept out to the sea and that their birthrights in water are being seized by those who will thereby become their masters and their rulers in all time to come.

Is there not something here for schools to gladly learn and gladly teach?

WE ARE ALL RESPONSIBLE.

When expressing our indignation at the wicked waste of the people's heritages it is well to remember that it is the people who are to blame for it. You and I and all of us are the criminals, not merely the men and the corporations who have so largely profited by the wasted resources. It is easy to work up wrath and blow off steam about them; but we must remember that they have played the game according to the rules, and that we, the people, make or consent to the rules of the game—the laws. The big boys often try to change the rules and use them unfairly doubtless, as in smaller games; but if all the other children attend to it, take an interest in it, stick together, they can make the rules right and keep the big fellows within bounds.

It is well to remember this: most of us, if we could, would do just what the "predatory rich" have done.

One of the worst things that have been done, probably the very worst, has been the taking away of the timber lands from the people. But how has this been done? By buying out small owners for small prices. Our careless and reckless law gives to any one 160 acres of timber land if he or she will make oath that it is for his own use, not to be used for the benefit of some one else. In my travels I find many people, nice people, school teachers, ministers, ladies and gentlemen, locating timber claims—and selling them as soon as title is complete, for a few hundred dollars—three hundred, five hundred, perhaps; yet the timber itself is really *worth* many thousands of dollars, to say nothing of the land on which it stands.

Thus, for an insignificant sum for our own selfish immediate use do we nice people sell the birthrights of our children's children. Thus the great timber corporations acquire empires of land and princely fortunes in timber. Thus does our country lose its heritage for all time. Wherefore remember that we, the people, have our share of responsibility in this thing. We accept these laws and help to make them. We take a small share of the swag ourselves when we can get it.

The reason for the wasting and plundering and going to smash of this vast and splendid estate of ours is not hard to find. It is from a simple and natural cause, a universal law—*because we, the owners, have neglected it.* Any property, any enterprise goes to wreck and ruin if it is not attended to, guarded, watched over, by its owners. What would happen to a great store or a mill or a mine if it were abandoned to whomever happened along? How would a farm prosper if none of its owners took the trouble to look *after it*? Why, even a $500 house in a little

village will soon be damaged beyond repair, broken, run down, carried away, when it is not cared for by its owners! And who gets the blame in such case? Not the boys who throw stones through the windows nor the petty thieves who carry off the fence for kindling wood—but the people who own it and are responsible for it. WE ARE ALL RESPONSIBLE.

[E. H.]

TEACHING CONSERVATION.

But how can a teacher teach Conservation? By exuding it through the pores! If it gets in it will come out!

A wise teacher will find a hundred ways to drop good ideas into the hearts of her children.

For instance, in the careful use of the school supplies. Economy and wise care are virtues greatly to be desired in all our citizenry. The teacher is not working for the sake of saving a few cents for the school fund; but for the *habits* of the children, their way of looking at things, during all their future lives. Carelessness, extravagance, recklessness, are dangerous to the nation. The difference between conservation and reckless waste may be taught in the use of such a common thing as *paper,* for example. Indeed, paper is really one of our national resources, as it is made of wood pulp, and wood pulp is made from trees. A big edition of a Sunday newspaper requires perhaps a dozen acres of woodland. Every sheet of paper, every desk, every box, every splinter of wood that we see or use, represents trees, trees that were chopped from our forests. Every one of our eighty million people uses more than seven times as much wood per year as do the people all over Europe. Every big city fire destroys a great and splendid forest. Millions upon millions of acres of woodland continually go into the ties along our railroad lines. Countless other forests are rotting away deep under ground in the coal mines and gold mines.

The teacher who goes into the subject with interest himself will find no lack of striking and interesting and valuable things to pass along to his flock; things that point to civic patriotism; things more vital to their fatherland than the waving of battle flags and defiance of the foreign foe! [E. H.]

THE CONSERVATION OF OUR NATURAL RESOURCES.

This article will well repay thoughtful reading. It is by Gifford Pinchot, the United States Forester, and was delivered as an address to the National Geographic Society a few months ago. Note its simplicity and its strength.

A Story With a Moral.

The conservation of our natural resources is a subject which has received little attention in the past; but the facts in the case are so simple, the principles so elementary, and our duty so clear, that they might be fitly presented in a story like one of the old fairy tales that we all loved when we were boys and girls. Such a story would run like this:

Once upon a time there was a young man who had been given a great property in a distant region, and who left home to take possession of it. When he reached his property he first made himself acquainted with it. As he explored it and studied its value he began to think how he would make his living out of it. The problem was not a hard one. He found that his property was wonderfully rich, and supplied his needs at the cost of far less exertion than he would have had to make at home, for it was a fair land, well watered, well timbered, abounding in game and fruits, with broad meadows for cattle and horses and sheep, and with no small store of rare and curious minerals and an outcrop of excellent coal. Life was easy, and he lived lavishly and joyously, after the initial hard work of moving in and building his house and raising his first crops was over. He had far more land than he could use, far more game, and what he lacked he was able to buy from home with furs, with timber, with minerals, and with the surplus of his crops.

By and by he saw and liked a girl, and finally married her. Together they prospered on the property, which seemed too rich to make it necessary for them to trouble about the future. Game was still plenty, though less so than at first; the timber, though growing less, was still abundant enough to last longer than they could hope to live; by breaking new land they could always count on marvelous crops; the coal was a little harder to get at, but still close to the surface, and besides the man only dug out the easiest to reach, and when the earth began to cave in he merely started again at a new place. His stock, grazing on the meadows, had trampled out some of the grass, but there was still no lack. That some day strangers would possess their property when they had done with it, and would find it somewhat run down, did not trouble these two good people at all.

But children came to them with the years, and by and by these children began to grow up. Then the point of view of the man and his wife changed. They wanted to see their sons and daughters provided for *and settled on this property* of theirs, and they began to see that

what was enough and to spare for them would not support all their children in the same comfort unless they themselves used it with better foresight. Through thinking of their children they were led to live more in the future.

They looked forward and said to themselves: "Not only must we meet our own needs from this property, but we must see to it that our children come in for their fair share of it; so that after a while the happiness we have had here may be carried on to them." So the family established itself. The man became respected, and his children grew up healthy and happy around him; and when in the fullness of time he passed away and his children took the place in which he had stood, because of his foresight and care they enjoyed the same kind of prosperity he had enjoyed.

It is a perfectly simple story; we all of us can name scores of men who have done this same thing. The men and the women who do it are not famous, are not regarded as remarkable in any way; they are simply good, everyday, average citizens, who are carrying out the duties of the average citizen.

What Have We Done With Our National Resources?

Once upon a time there was a young nation which left its home and moved on to a new continent. As soon as the people who formed the first settlements began to examine the value and condition of this new continent, they found it marvelously rich in every possible resource. The forests were so vast that, in the early days, they were not a blessing, but a hindrance. The soil was so rich and there was so much of it that they were able at first only to cultivate the edges of their great property. It was quite plain to these people in the early times that, however much land they might cover, however much they might waste, there was always going to be plenty left. As time went on they discovered greater and greater resources. They found wonderfully rich deposits of metallic ore; great oil and gas fields, and vast stretches of the richest bituminous and anthracite coal lands; noble rivers flowing through broad expanses of meadow; rich alluvial prairies; great plains covered with countless herds of buffalo and antelope; mountains filled with minerals; and everywhere opportunities richer than any nation had ever found elsewhere before.

They entered into this vast possession and began to use it. They did not need to think much about how they used their coal, or oil, or timber, or water—they would last—and they began to encroach on the supply with freedom and in confidence that there would always be plenty. The only word with which they described what they had, when they talked about it, was the word "inexhaustible."

Let us see for a moment what the course of development of this young nation was. First of all they needed men and women to settle on the land and bring up children and have a stake in the country. That was absolutely necessary before there could develop the great nation which some of them saw ahead. As the population spread there arose a need that great systems of transportation should be built to knit the country together and provide for the interchange of its products. These railroads called for iron, coal, and timber in great quantities. Then began an unprecedented demand upon the forests. They could not build those transcontinental railroad lines without millions upon millions of railroad ties cut from the forests of the country; and they could not mine the iron and coal except as the forests gave them the means of timbering their mines, transporting the ore, and disposing of the finished product. The whole civilization which they built up was conditioned on iron, coal, and timber. As they developed their continent, richer than any other, from the east coast to the west, new resources became revealed to them, new interests took possession of them, and they used the old resources in new ways. In the East, the rivers meant to them only means of transportation; in the West they began to see that the rivers meant first of all crops; that they must put the rivers on the land by irrigation before they could grow wheat, alfalfa, fruits, sugar beets, and other crops that make the West rich. They found that to feed the vast population which had grown up in the East they must have the vast ranges of the West to grow meat. They found that the resources of soil and water which produced the wheat, the cotton, and the meat—of iron and coal, and of timber, together made up the working capital of a great nation, and that the nation could not grow unless it had all of these things. In taking possession of them our nation used with greater effectiveness, greater energy and enterprise, than any other nation had ever shown before. Nothing like our growth, nothing like our wealth, nothing like the average happiness of our people can be found elsewhere; and the fundamental reason for this is, on the one side, the vast natural resources which we had at hand, and on the other side the character, ability, and power of our people.

Now what have we done with these resources which have made us great, and what is the present condition in which this marvelously vigorous nation of ours finds itself? The keynote of our times is "development." Every man from New York to San Francisco looks to the development of the natural resources to produce the advantages and the opportunities he wants for his neighbors and his friends. Any one who questions the wisdom of any of the methods we are using in bringing that development to pass, because he believes we are making mistakes that will be *expensive* later on, is in danger of being considered

an enemy to prosperity. He is in danger of having it thought of him that he does not take pride in our great achievements, that he is not a very good American. But in reality it is no sign that a man lacks pride in the United States and the wonderful things our people have done in developing this great country because he wants to see that development go on indefinitely. On the contrary, real patriotism and pride in our country make it the first of all duties to see that our nation shall continue to prosper. In sober truth, we have brought ourselves into a condition in which the very serious diminution of some of our most necessary resources is upon us.

What We Face.

Forest Resources.—A third of the land surface of this country was originally covered with what were, all in all, the most magnificent forests of the globe—a million square miles of timberland. In the short time, as time counts in the life of nations, we have been here we have all but reached the end of these forests. We thought it unimportant until lately that we have been destroying by fire as much timber as we have used. But we have now reached the point where the growth of our forests is but one third of the annual cut, while we have in store timber enough for only twenty or thirty years at our present rate of use. This wonderful development, which would have been impossible without the cutting of the forests, has brought us where we really face their exhaustion within the present generation. And we use five or six times as much timber per capita as the European nations. A timber famine will touch every man, woman, and child in all the land; it will affect the daily life of every one of us; and yet without consideration, without forecast, and without foresight, we have placed ourselves, not deliberately, but thoughtlessly, in a position where a timber famine is one of the inevitable events of our near future.

Canada can not supply us, for she will need her timber herself. Siberia can not supply us, for the timber is too far from water transportation. South America can not supply us, because the timbers of that vast continent are of a different character from those we use and ill adapted to our need. We must suffer because we have carelessly wasted the forest, this great fundamental condition of success. It is impossible to repair the damage in time to escape much suffering, although not too late to work hard to reduce it as much as we can.

Minerals, Oil, and Natural Gas.—But forests only begin the story of our impaired capital. Our anthracite coals are said to be in danger of exhaustion in fifty years, and our bituminous coals in the beginning of the next century; some of our older oil fields are already exhausted; the natural gas has been wasted, burning night and day in many towns *until the supply* has failed. Our iron deposits grow less each year.

Our ranges in the West, from which we first drove the buffalo to cover them again with cattle and sheep, are capable of supporting but about one half what they could under intelligent management, and the price of beef is raised accordingly. Nearly every one of our wonderful resources we have used without reasonable foresight or reasonable care, and as each becomes exhausted a heavier burden of hardship will be laid upon us as a people.

Now what is our remedy? The remedy is the perfectly simple one of common sense applied to national affairs as common sense is applied to personal affairs. This is no abstruse or difficult question. We have hitherto as a nation taken the same course as did at first the young man who came into possession of his new property. It is time for a change.

It is true that some natural resources renew themselves while others do not. Our mineral resources once gone are gone forever. It may appear, therefore, at first thought that conservation does not apply to them since they can be used only once. But this is far from being the fact. Methods of coal mining, for instance, have been permitted in this country which take out on the average but half of the coal. Then in a short time the roof sinks in on the other half, which thereafter can never be mined. Oil and natural gas also have been and are being exploited with great waste and as though there never could be an end to them. The forests we can replace at great cost and with an interval of suffering.

Soil Waste.—The soil which is washed from the surface of our farms every year to the amount of a billion tons, making, with the further loss of fertilizing elements carried away in solution, the heaviest tax the farmer has to pay, may in the course of centuries be replaced by the chemical disintegration of the rock; but it is decidedly wiser to keep what we have by careful methods of cultivation. We may very profitably stop putting our farms into our streams, to be dug out at great expense through river and harbor appropriations. Fertile soil is not wanted in the bed of a stream, and it is wanted on the surface of the farms and the forest-covered slopes of the mountains. Yet we spend millions upon millions of dollars every year removing from our rivers what ought never to have got into them.

Waste Through Piecemeal Planning.

Besides exhausting the unrenewable and impairing the renewable resources, we have left unused vast resources which are capable of adding enormously to the wealth of the country. Our streams have been used in the West mainly for irrigation and in the East mainly for navigation. It has not occurred to us that a stream is valuable, not merely for one, but for a considerable number of uses; that these uses are not mutually *exclusive*, and that to obtain the full benefit of what

the stream can do for us we should plan to develop all its uses together. For example, when the National Government builds dams for navigation on streams, it has often disregarded the possible use, for power, of the water that flows over those dams. Engineers say that many hundred thousand horsepower are going to waste over Government dams in this way. Since a fair price for power, where it is in demand, is from $20 to $80 per horsepower annually, it will be seen that the Government has here, developed, yet lying idle, a resource capable, under the right conditions, of adding enormously to the national wealth. So also in developing the western streams for irrigation, in many places irrigation and power might be made to go hand in hand.

Danger of Monopoly.

If the public does not see to it that the control of water power is kept in the hands of the public, we are certain in the near future to find ourselves in the grip of those who will be able to control, with a monopoly absolutely without parallel in the past, the daily life of our people. Let us suppose a man in a western town, in a region without coal, rising on a cold morning, a few years hence, when invention and enterprise have brought to pass the things which we can already foresee as coming in the application of electricity. He turns on the electric light made from water power; his breakfast is cooked on an electric stove heated by the power of the streams; his morning newspaper is printed on a press moved by electricity from the streams; he goes to his office in a trolley car moved by electricity from the same source. The desk upon which he writes his letters, the merchandise which he sells, the crops which he raises, will have been brought to him or will be taken to market from him in a freight car moved by electricity. His wife will run her sewing machine or her churn, and factories will turn their shafts and wheels, by the same power. In every activity of his life that man and his family and his neighbors will have to pay toll to those who have been able to monopolize the great motive power of electricity made from water power, if that monopoly is allowed to become established. Never before in the history of this or any other free country has there existed the possibility of such intimate daily friction between a monopoly and the life of the average citizen.

It has not yet occurred to many of our people that this great power should be conserved for the use of the public. We have regarded it as a thing to be given away to any man who would take it. We have carried over our point of view derived from the early conditions when it was a God-send to have a man come into the country to develop power and we were willing to give him anything to induce him to come. We have carried over that point of view into a time when the dread of

monopoly of this kind ought to be in the mind of the average man everywhere. That is an instance of a resource neglected from the point of view of the public.

A New Point of View.

But this is a time to consider not one resource, but all resources together. Already here and there small associations of citizens have become possessed of certain facts, and have begun to work at certain sides of what is fundamentally one great problem. We have a drainage association, whose object is to make habitable millions upon millions of acres now lying waste in swamps all over the country, but capable of supporting in comfort millions of people. We have forestry associations, waterway associations, irrigation associations, associations of many kinds touching this problem of conservation at different points, each endeavoring to benefit the common weal along its own line, but each interested only in its own particular piece of the work and unaware that it is attacking the outside, not the heart of the problem. Now a greater thing is opening out in the sight of the people. This problem of the conservation of natural resources is a single question. Each of these various bodies that have been working at different phases of it must come together on conservation as a common platform. By the joining of these units we shall have a mass of intelligent, interested, public-spirited citizens anxious to adopt a new point of view about this country of ours.

That is the crux of the whole matter—a new point of view about our country. We have been so busy getting rich, developing and growing, so proud of our growth, that we have let things go on until some intolerable abuse has driven us to immediate action. It is time that we put an end to this kind of opportunism, of mere drifting. We must take the point of view taken by the average prudent business man, or man in any walk of life who has property and is interested in it. What the average man does in his own affairs is to foresee trouble and avoid it if he can. What this nation of ours is doing in this fundamental matter of natural resources is to run right into trouble head down and eyes shut, and so make that trouble inevitable before taking any step to prevent it. But it should not take long to reach the stage of national thought where we shall deliberately plan to avoid the difficulties which can be foreseen, if only we can bring together all who have already begun to concern themselves with one or another aspect of the conservation problem.

The Problem Before Us.

This nation has, on the continent of North America, three and a half million square miles. What shall we do with it? How can we make ourselves and our children happiest, most vigorous and efficient, and our

civilization the highest and most influential, as we use that splendid heritage? Ought not the nation to undertake to answer that question in the spirit of wisdom, prudence, and foresight? There is reason to think we are on the verge of doing this very thing. We are on the verge of saying to ourselves: "Let us do the best we can with our natural resources; let us find out what we have, how they can best be used, how they can best be conserved. Above all, let us have clearly in mind the great and fundamental fact that this nation will not end in the year 1950, or a hundred years after that, or five hundred years after that; that we are just beginning a national history the end of which we can not see, since we are still young." In truth we are at a critical point in that history. We may pass on along the line we have been following, exhaust our natural resources, continue to let the future take care of itself; or we may do the simple, obvious, common-sense thing in the interest of the nation, just as each of us does in his own personal affairs.

On the way in which we decide to handle this great possession which has been given us, on the turning which we take now, hangs the welfare of those who are to come after us. Whatever success we may have in any other line of national endeavor, whether we regulate trusts properly, whether we control our great public service corporations as we should, whether capital and labor adjust their relations in the best manner or not—whatever we may do with all these and other such questions, behind and below them all is this fundamental problem. Are we going to protect our springs of prosperity, our sources of well-being, our raw material of industry and commerce, and employer of capital and labor combined; or are we going to dissipate them? According as we accept or ignore our responsibility as trustees of the nation's welfare, our children and our children's children for uncounted generations will call us blessed, or will lay their suffering at our doors. We shall decide whether their lives, on the average, are to be lived in a flourishing country, full of all that helps to make men comfortable, happy, strong, and effective, or whether their lives are to be lived in a country like the miserable outworn regions of the earth which other nations before us have possessed without foresight and turned into hopeless deserts. We are no more exempt from the operation of natural laws than are the people of any other part of the world. When the facts are squarely before us, when the magnitude of the interests at stake is clearly before our people it will surely be decided aright.

CULTIVATE THE FORESTS.

This is a clipping from a fine article upon the STATESMANSHIP OF FORESTRY by Author W. Page in the World's Work Magazine for January, 1908. A number of the pictures in this volume are from the same source.

Many people consider the approaching timber famine with the same feeling of regret and helplessness with which they listen to the story of the extinction of the buffalo. They feel that both are wild things which must inevitably perish before the advance of civilization. But the forests, unlike the buffalo, thrive in captivity. A large proportion of the trees in a wild forest are not best suited to our use. They are of the wrong species—like weeds in a garden—are too old or crooked and have a variety of other blemishes; and, while doing us little good themselves, they prevent the growth of better timber. To destroy all the original growth and then plant a new forest on the devastated area seems illogical, but it is neither impractical nor unprofitable, as the experience of Germany and experiments in this country show. It is much easier, however, and more profitable, gradually to turn the wild forests into cultivated ones.

The French began to do this in the fourteenth century. * * * France, as thickly settled as it is, has maintained its cultivated timber for five hundred years, while the West with its scattered population is about to make an end of its wild forests in seventy-five years. In contrast to the forestry conditions of France are those of southern Tunis. It was once a very fertile country, but the Arab conquest destroyed all the trees and now the ruins of its old capital, Suffetula, stand in an uninhabitable desert. "Not long after the conquest," says M. Jusseraud, "an Arab chronicler recalled in his book the former times of prosperity and added: 'But in those days, one could walk from Tripoli to Tunis in the shade.'"

CONFESSION TO NEXT GENERATION.

Clipping from a graduating address to the Fresno High School by Dr. Frederic Burk.

"We dislike to go on with these embarrassing confessions, but you will learn the whole wretched story yourselves sometime, and we may as well tell you. As for the coal and iron, our fathers left us enough to last for two or three thousand years if it had been economically mined according to some system established by law. We regret to tell you, upon the authority of Andrew Carnegie and John Mitchell, that we've wasted in getting out what we could use what should have lasted eighteen hundred or two thousand years. The coal may hold out

another two hundred years and the iron one hundred years, but both will come high in your time. We wish we did not have to mention the oil and the natural gas, but we may as well tell you that we've sucked them out of the earth almost completely and wasted them.

Dear next generation, such is part of the shameful explanation truth compels us to make to you concerning the waste and loss of your patrimony. We've skimmed the cream and have led jolly lives—we do sincerely hope you like skimmed milk, and little of it. When you are shivering with the cold in a coalless country, when you are nursing one blade of grass to grow for you where two grew for us, when you have ceased automobiling on account of the high price of oil, then you'll remember us in our riotous plenty. Don't be too angry with us. We robbed you. We took the bread out of your mouths, you our babes, and fed it to the vultures who were fattening upon our national dishonor. But our sins have been the sins of ignorance rather than of willfulness. Your fathers were happy, devil-may-care fellows, whose courage, as war patriots, you must in justice honor, but who never had any comprehension of the meaning of a civil patriot nor the slightest realization that it required any of the qualities of courage, self-sacrifice for the common good, and intelligence which in war patriotism we have exemplified."

OUR WATER LAWS.

Pointed Statement from a letter by Allison Ware, of the San Francisco State Normal School.

"Worst of all, the water running in our streams has been so carelessly handled by our laws, (patterned as they are after the laws of England, where water is a pest and the only thought is to get it off the place as quickly as possible,) that most of it is now in private ownership, much of it many times over, with results that have produced widespread discomfort and that clearly throttle the growth of the State as a land of farming.

A few things, it seems to me, the people of California must speedily come to understand. First, the wonderful value of water; what it means to the farmer, to the manufacturer, to the main sources of wealth of all sorts. Second, the endless litigation, fearful waste of water wealth, harsh water-lordism, an uneconomic application of streams to production; all the results of our foolish laws. Third, that there is a remedy, partial because we have been slow to seek it, but still a remedy that will save to the future the possibility of sustaining an agricultural community of two million prosperous homes in California.

As to this great subject of water in relation to agriculture in California, Bulletin 100, Department of Agriculture, contains the whole *story and shows* us our tardy remedy."

LAST OF THE BIG TREES.

Extracts from a notable article in Collier's Weekly under the above title by Arthur Ruhl. Doubtless a good deal of this will seem merely sentimental to a hard-headed business man who deals in trees and lumber. Nevertheless, it is well to remember that the mightiest things are started by sentiments. Every great movement that has affected the destinies of mankind had its beginning in a mere sentiment that somehow found lodgment in some one's heart. The wise man harkens carefully to the drift of sentiment.

They rise up two hundred, two hundred and fifty, three hundred feet sometimes, the trunks bare of branches for seventy-five or a hundred feet, fluted, gray-brown columns like pillars of stone. Far overhead, the delicate tracery of their foliage weaves a roof which shuts out the direct sunlight and gives to everything below the soft twilight radiance of a cathedral. Like a Gothic cathedral, indeed, is the natural aisle

Redwood monarch on the way to the mill.

with the fluted, columnar trunks rising side by side toward the mountain background, the mellowed light filtering through the arching roof far above.

Even the curious fluted trunks and the color—a cinnamon turned stone-gray by age and weather—seems exotic and to belong to an older age, when strange and monstrous animals roamed the forests. And well they may look so, for they—and more especially their near relatives, the giant Sequoias of the Sierras—are the oldest living things in our world. The latter have conquered fire and snow and the other enemies that have attacked them through the centuries, and stood there, lofty and silent and serene, while wars have raged and been forgotten and religions grown up and fallen to decay. The redwoods proper, as these trees in the Bohemian grove are called, are not quite so ancient, but they were mighty trees, at any rate, before the Roman Empire fell, and they and their brothers may still be standing when the solitary New Zealander looks upon the ruins of St. Paul's—those at least which haven't been *cut up into fence*posts and shingles.

To an outsider, the spell they cast necessarily overshadows the doings of the little humans playing at their feet. In the cool, fragrant interior of the grove, the hectic bustle of the ordinary world seems trifling and unimportant. Voices come pleasantly across the great spaces; even the humor of the street, provided it has a basis in reality, is mellowed and enriched and merged into the region of art. The grove becomes a world in itself—a more radiant world; you walk out into the open and are conscious of leaving some enchantment behind, of entering a more difficult, harsher, more material universe. Voices sound as from very far away through the trees, men lounging in groups here and there are listening and laughing carelessly—it is as though the blessings of

A redwood forest in California in its natural state. Observe the shrubs and ferns that flourish in the cool aisles of the woodland.

humor and grace and happy insight belonged to all who breathed that air.

An Easterner, a young poet and playwright, was a guest at the camp. He had never been West before, never seen the big trees. And it was into this pagan temple that he was led. The day before, he and some of his friends went to another forest nearby, the Armstrong grove. Here were the same trees, only a little wilder, with more of the natural undergrowth between. And that same day, in a newspaper, he read that the Armstrong grove had been sold to a lumber company. It was about midnight that night when I first caught sight of him on the opposite side of the circle that surrounded the huge club campfire. He came over to our side. He was like some one who had just seen innocent men condemned to death and knew that if he could not get help they would be executed the next morning. His voice shook as he spoke.

"Why, I've *seen* them," he said. "They are all numbered—61-73-87

—ready to cut. They are just like these''—he motioned upward where the dark roof of the forest closed in far above the light of the fire. ''And they're going to cut them down. Why, it seemed to me when I saw those numbers—you go over to-morrow morning and you'll understand—if a man could only prevent that destruction, could only save those trees! * * *''

The Giant Tree proper lives only in the thin, dry air of the Sierras, rarely below 5,000 feet altitude, climbing thence up to the 8,000-foot level and even higher, so that it may look, with little hindrance, to the bare peaks and the glaciers above. It is found in much less homogeneous forests than the redwood, sharing the dominion of these sunny plateaus with mighty sugar and yellow pines and spruces and firs.

Here is the redwood forest after it has been "developed" by our wasteful methods.

In the southern portions of the belt, along the Kaweah and Tule rivers, there are Giant-Tree groves that deserve to be called forests—vigorous young trees and saplings, growing beside their ancient, storm-stricken sires, but more often the Giant Trees bear much the same relation to the forest as a whole as is borne by the occasional primeval oaks found among the common second-growth timber in the ''woods'' of the East and Middle West.

The largest tree known is probably the ''General Sherman,'' in the Giant Forest Grove in the Sequoia National Park, about forty miles east of the town of Visalia, in the central southern part of the State. It has a circumference of 103 feet; 200 feet from the ground it is not less than 70 feet around, and even with its crown broken off it is 280 feet high.

It was of such trees as this, which, scarred by fire, broken off by

storms or lightning, yet tower aloft in a majesty and beauty almost undimmed, as if gifted with eternal life, that John Muir wrote:

> "So exquisitely harmonious and finely balanced are even the very mightiest of these monarchs of the woods, in all their proportions and circumstances, that never is anything overgrown or monstrous looking about them. * * * No other tree in the Sierra forest has foliage so densely massed, nor presents outlines so firmly drawn and so steadily subordinate to a special type. A knotty, ungovernable-looking branch, five to eight feet thick, may be seen pushing out abruptly from the smooth trunk, as if sure to throw the regular curve into confusion, but as soon as the general outline is reached, it stops short and dissolves in spreading bosses of law-abiding sprays, just as if every tree were growing beneath some huge, invisible bell glass, against whose sides every branch was being pressed and molded, yet somehow indulging in so many small departures from the regular form that there is still an appearance of freedom. * * *
>
> "As soon as any accident happens to the crown of these Sequoias, such as being stricken off by lightning or broken by storms, then the branches beneath the wound, no matter how situated, seem to be excited, like a colony of bees that have lost their queen, and become anxious to repair the damage. Limbs that have grown outward for centuries at right angles to the trunk begin to turn upward to assist in making a new crown, each speedily assuming the special form of true summits. Even in the case of mere stumps, burned half through, some mere ornamental tuft will try to go aloft and do its best as a leader in forming a new head. * * *
>
> "I never saw a big tree that had died a natural death; barring accidents, they seem to be immortal, being exempt from all the diseases that afflict and kill other trees. Unless destroyed by man, they live on indefinitely, until burned, smashed by lightning, or cast down by storms or by the giving way of the ground on which they stand. * * * The colossal scarred monument in the Kings River forest is burned half way through, and I spent a day in making an estimate of its age, clearing away the charred surface with an axe, and carefully counting the annual rings by the aid of a pocket lens. The wood rings in the section I laid bare were so involved and contorted in some places that I was not able to determine its age exactly, but I counted over four thousand rings, which showed that this tree was in its prime, swaying in the Sierra winds when Christ walked the earth. No other tree in the world, as far as I know, has looked down on so many centuries as the Sequoia, or open such impressive and suggestive views into history."

And it is monarchs like these, who have seen the sun rise on a million crystalline Sierra mornings, who have fought their centuries of battle *against* fire and winter snows and thunderbolts and winds, who must *now fall before* tiny scrambling humans with ravenous axes and be

turned into posts and grapevine stakes. At the close of the same chapter quoted above is Muir's prophecy that *"unless protective measures be speedily invented and applied, in a few decades, at the farthest, all that will be left of the Sequoia gigantea will be a few hacked and scarred monuments."*

Yet all through the belt these wonderful monuments are being destroyed. They are not felled to make pillars for temples. No unusual or beautiful service is performed through their destruction. They are first chopped down, then, with enormous waste, blown to pieces with gunpowder, and then ironically split up into fence posts and grapevine stakes. That is about as low a task a good wood could be put to—only a step higher than the splinters from old boxes which elderly ladies stick into flowerpots to hold up geraniums.

The only grove thoroughly safe from destruction is the Mariposa, which is owned by the State of California. In the Sequoia and General Grant National Parks, which, theoretically, are owned by the nation, there are about 1,200 acres in private ownership. Captain Young secured options on the Sequoia National Park holdings a few years ago, and the Government could have bought them then, it is said, for the very reasonable sum of $86,000. However the owners may have acquired title, it is only fair to say that they have made no attempt to hold up the Government for an unreasonable price. As usual, however, Congress did not see fit to act. There is nothing to prevent the destruction of these trees, should the owners choose to cut them down, except the fact that there is no lumber road out of the park, and the Government has thus far declined to grant a right of way. If the owners chose to force their claim, however, it is extremely doubtful if the Government's position could be legally upheld.

The preservation of giant trees is a question for the people themselves. How much are these trees worth to them, not as lumber, but as monuments, as wonderful and beautiful relics of a vanished age? For they are relics and monuments—the world has no other Sequoias. They are either to be preserved or destroyed forever—like the Pyramids or the Parthenon. And although there are several groves, the number of trees which, in comparison with the majestic pines and firs and spruces round them, can properly be called "giant" trees is probably not more than five hundred.

Just what methods Government, State, and individuals should adopt is rather beyond the purpose of this article, which merely undertakes to explain what and where the giant trees are. To be sure, one can't help thinking of California millionaires. Some of them have public spirit and wish to do something for their country. Any man who saves one of these groves, or even one giant tree for the people bestows a gift which not only *will do him honor* during his lifetime, but will still be

standing, as it is to-day, hundreds, possibly thousands, of years after all the vain little human structures of our day have crumbled to pieces or been pounded up into macadam streets.

DREDGER MINING.

Our laws are stupid, too, in regard to the dredger industry. They allow capitalists to come into our fertile valleys, pay big prices for fields, orchards, vineyards, and convert them into barren piles of rocks. This makes a temporary prosperity. The owners of the soil get a lot of money, work is plentiful, prices are good—and the capitalist carries away large profits, perhaps. But the brief prosperity passes away in four or five years—and what of the land? It is no more! It would have otherwise been producing food, supporting people and paying taxes for four or five hundred years or four or five thousand—but now it is gone. It is a hideous desolation for all time to come.

There is something wrong in this. It is legal at present, but it is not moral. No one should have a right to destroy the Homes of the future. It is against the general good. We have a right to *use* the land—but not to *destroy* it. [E. H.]

THE LOSS OF OUR SOIL.

This striking statement is from that splendid journal The Outlook, edited by Lyman Abbott.

We are in the habit of speaking of the solid earth and the eternal hills as though they, at least, were free from the vicissitudes of time, and certain to furnish perpetual support for prosperous human life. This conclusion is as false as the term "inexhaustible" applied to other natural resources. The waste of soil is among the most dangerous of all wastes now in progress in the United States. In 1896 Professor Shaler, than whom no one has spoken with greater authority on this subject, estimated that in the upland regions of the states south of Pennsylvania three thousand square miles of soil had been destroyed as the result of forest denudation, and that the destruction was then proceeding at the rate of one hundred square miles of fertile soil per year. No seeing man can travel through the United States without being struck with the enormous and unnecessary loss of fertility by easily preventable soil wash. The soil so lost, as in the case of many other wastes, becomes itself a source of damage and expense, and must be removed from the channels of our navigable streams at an enormous annual cost. The Mississippi River alone is estimated to transport yearly four hundred million tons of sediment, or about twice the amount of material to be excavated from the Panama Canal. This material is the most fertile portion of our richest fields, transformed from a blessing to a curse by unrestricted erosion.

THE LARGEST NATIONAL TASK.

From the address of President Roosevelt at the meeting of the Conservation Conference held in Washington, D. C., December 8, 1908.

I welcome you to Washington and to the work you have gathered to do. No service to the nation in time of peace could be of greater worth than the work which has brought you together. In its essence your task is to make the nation's future as great as its present. That is what the conservation of our resources means. This movement means that we shall not become great in the present at the expense of the future, but that we shall show ourselves truly great in the present by providing for the greatness of our children's children who are to inherit the land after us. It is the largest national task of to-day, and I thank you for making ready to undertake it.

I am especially glad to welcome the coöperation of the States, through their Conservation Commissions and otherwise. Such coöperation gives earnest of mutual assistance between states and nation, and mutual benefits to follow. Without it the great task of perpetuating the national welfare would succeed, if at all, with difficulty. If states and nation work for it together, all in their several fields, and all joining heartily where the field is common, we are certain of success in advance. We are concerned with the people's rights; if this means national rights, well and good; if it means states' rights, well and good; we are for whatever serves the cause of the people's rights.

The results of the inventory of resources will be laid before the present conference by the National Conservation Commission. I shall not attempt to review these results further than to say that the more striking facts brought out at the conference last May are amply confirmed. These facts are sobering. No right-minded citizen would stop the proper use of our resources, but every good American must realize that national improvidence follows the same course and leads to the same end as personal improvidence—and no man is a good American if he does not think of future Americans, any more than a man is a good citizen if he does not think of his children's welfare; for there isn't any man whom we despise more than the man who has a good time himself and whose children pay for it. So with the nation; that nation is contemptible that riots in abundance by wasting the heritage it should leave to the citizens that are to come afterwards. Needless waste must stop. The time to deride or neglect the statements of experts and the teaching of the facts has gone by. The time to act on what we already know has arrived. Common prudence, common sense, and common business principles are applicable to national affairs just as they are to private affairs, and the time has come to apply them in dealing with the foundations of our prosperity.

THE WASTE IN MUD.

This article is from The Saturday Evening Post of March 27th. It is a fine example of modern American newspaper English. It tells the story in a deliciously whimsical, humorous way. Yet the grim facts stick out boldly all through it, in spite of its quips and jests. It is by Emerson Hough.

With the exception of that certain wicked uncle, of whom nothing ever was expected and of whom no good could be predicted, all your family, like the average American family, no doubt regularly went to church. Probably the majority stayed over for Sabbath-school in the little church with white walls and black walnut pews. You could not have been in a better place. At church or Sabbath-school you all stood in a row and sang that easy, lilting old hymn which says:

> Little drops of water, little grains of sand,
> Make the mighty ocean and the pleasant land.

You could not have sung a better song. We all used to sing that song with cheerfulness, indeed with enthusiasm—*Lit*-tle drops of wa-a-a-ter, *lit*-tle gra-ay-ins of sand, make the mighty *o-o*-shun, *an'* the pleh-heh-sent la-a-a-nd! That was the way it ran. After we had sung it we all went home and forgot all about it. The next Monday morning Dad went back to farming, just the way his Dad had, and the Dad who antedated that one, world without end; and not one of those Dads was ever wise enough to know the hymn was right, or to figure out what the hymn meant or ought to mean. It is a splendid hymn, full of vast elemental truth, and it has a lot to do with farming.

Heretofore, your folks and mine hadn't thought that geology had much to do with farming, any more than religion had. As a matter of fact, they both do. The only trouble is, the average American, like you and me, does very little thinking in religion, politics or business. The farmer knows the country immediately around him. The city man does not even know all of the city where he lives, only a little corner of it. It is this carelessness in religion, politics, business and geology which gives the sad-eyed Mr. James J. Hill still further opportunity to grieve over the future of this country.

What Mr. Hill sees is the time when five hundred millions of Japanese and Chinamen will be making all our manufactured goods under a scale of living so much cheaper than the American standard as to crush out all American competition. This means not only the fiercest struggle ever known for trade, but the fiercest struggle ever known for a mere living. It is the war between the Oriental standard of living and the American standard as we now know it. The decisive battle of that war must be fought on the American farm, not in the California legislature. The American standard of living is based on the theory of an exhaustless

ık account. Our account has never been overdrawn, and we have ver had our bankbook balanced. It is only now that a few of our ser men begin to see that it is time for us to get a balance from the rk at the desk. We have been checking out, like inebriated mariners, ıat we had or thought we had in this rich bank of America, land of the e, country of endless opportunity. Now we have used up our forests, exhausting our mines at fearsome speed, have exterminated most of r wild game, endangered the food supply which comes from the ters, and, in general, done all we could to put an end to our great ources, recklessly spending not only our interest but also our princi-

ıundred acres of good land made worthless by flood. Orchards smothered and fence posts covered by sand.

. We have not even left unscathed the pleasant land. Not only are using up at mad speed the natural products of the soil, but also are ng up *the soil itself*.

f you think that the soil is exhaustless, or that it can be replaced, it ght behoove you to take a homeopathic dose of geology and also take ther guess. Mr. Roosevelt and most of the Congress of the United tes would like to have us all take the trouble of studying the ground stand on. Mr. Roosevelt's recent message asked us to pass our bank-ks in at the window for a balance. It is an unpleasant thing to do. ere are always so many more vouchers out than we thought. The ance is always so much *smaller* than we thought, and the bank has

such an unpleasant way of being right in its figures. Yet the time has come for a show-down between the American people and America itself.

Out on the Blackfoot Reservation there stands a tall, lone mountain, rising like a monument above the surrounding plain, and nearly detached from the Rockies, which lie behind it. This peak the Indians call Chief Mountain. Here the Blackfoot sometimes comes to pray. In his mysticism his prayer runs: "O Thou, at whose feet the buried years lie fallen!" That is to say, there is in his mind the thought of the slow forces of Nature. He reverences the idea of erosion. He would understand and not forget that hymn if he sung it, which in effect tells us that all we have in this world comes of the relations of soil and water. There will be a few million American farmers who will learn that same truth some time. The somewhat mad and drunken American people have ignored and inverted that truth heretofore. They have done all they could to go bankrupt, to ruin one of the richest portions of the earth's surface, one of the pleasantest lands ever taken over for human habitation, one obviously intended by the Great Forces as the place for the development of the highest form of civilization and the most splendid flowering of human endeavor.

Wasted country, caused by removal of forest cover. Heavy rains wash the soil away, down to naked rock. The river channels are clogged and this region is useless, lost to the world.

What is the pleasant land, and where does it come from? Of course, the average man supposes that the soil was always there, like Uncle Joe Cannon, Niagara Falls and the tax deficit; but, as a matter of fact, the *soil grew. In that* vast story the action was rather more deliberate than

that of a vaudeville sketch. Geology is not dramatic in that neurotic sense of the word which customarily we employ to-day. Yet you and I, and this country and other countries, are figures in the great drama. It might not harm us to note what a leading scientist says as to the time of the action of the play:

As a result of deforestation of the hills above a little stream swells to a torrent like this. The rich bottom land is carried away, leaving only rocks and gravel behind.

"For average rock, under ordinarily favorable conditions in our range of climate, the usual estimate has been a foot of waste in four thousand to six thousand years, which includes the channel cutting and bank undermining. These are too rapid for ordinary soil-waste under our normal natural conditions. Without any pretensions to a close estimate, I should be unwilling to name a mean rate of soil formation greater than one foot in ten thousand years on the basis of observation since the glacial period. I suspect that, if we could positively determine the time taken in the formation of the four feet of soil next to the rock

Farm land destroyed by gullies and sandbars from freshet. The farm was abandoned in consequence.

over the average domain where such depth obtains, it would be found above rather than below forty thousand years. Under such an estimate, to preserve good working depth, surface wastage should not exceed some such rate as one inch in one thousand years. When our soils are gone we too must go, unless we shall find some way to feed on raw rock or its equivalent."

So there is something in the story of the pleasant land. Search all the dictionaries through, comb out all the rhetoric books, and you couldn't get a happier phrase than that: "The pleasant land." It is excellent. It is perfect. Like any other savage, you feel a deep thrill of delight when you see the vast pictures of the unhurt out-of-doors. You have delight in the sight of green trees, of growing grasses and nodding flowers. This panorama of hill and dale, of rolling lands and forest-covered valleys and lofty mountains pleases you. Why? It is because all this was laid out in the intent of Nature to *produce* you and me and *support* us. It is beautiful in the beauty of utility. It is laid out on precisely the right lines to keep up the balance of the aforesaid little drops of water and little grains of sand, of which the one supports the other in the making of this pleasant land. It got its contours out of that balance. We grew out of the contours. This vast and splendid landscape is the portrait of our mother. We forget the hymn about it. Like a weak, irritable, nasty-tempered child, we strike the great Mother in the face, presuming on her vast indifference or her vast pity. And all the while Man is only the last animal that has been invented, and some time there will be a successor for him. If we destroy the soil we hasten that day when the successor shall come. Now the undeniable truth is that we are spending more than our inch of soil per thousand years.

Civilized man, money-mad business man, crazed man, average man, is doing all he can to destroy the balance between the little drops and the little grains. Not only is he doing all he can to invite the successor of man in the scheme of life, but he is hastening all he can that incidental intermediate thing—to give it, perhaps, the only interesting form into which the statement can be put in the terms of commercial To-day—the show-down between the American standard of living and that of other peoples who never had so big a bank account as ours, and who, therefore, learned to save.

This hymn of the soil is the one great hymn. It sings of the one great heritage of life. We speak of this or that man "owning" thus or so much of the earth's surface. That, of course, is impossible. He takes it or borrows it, perhaps, but he can own no more than six feet of it, and that only for a short time. The soil belongs to Life. The "buried years" resent any embezzlement of our great heritage. The soil is *owned by plants*, by animals, by men of this or that nation, this or that

age, that past, yonder future. If we sin against the soil, ours will be the Great Punishment—which is to say, extinction, oblivion. If you plow badly, it is you for the star-dust!

Even before Wall Street was invented there was more water than anything else in the world. Finally, on the little crust of land some tiny plant began to grow, no one knows just when. Perhaps at one time the plant could not have told whether it was a plant or an animal, but, anyhow, in time it turned into some green thing which looked tempting to some old Ichthyosaurus, and the latter, of a pleasant spring morning, while tired of eating salt stuff and canned goods, crawled up out of the water and made a meal on the first recorded salad. It looked good to

The soil of a whole valley washed away by a freshet. Observe the little island of good land left in the midst of a hopeless waste of cobblestones.

him and he came back. Other members of the Saurus family got on to the snap and also came up out of the water, all sorts of long-tailed and long-billed creatures, which, to make the story short, in time became land animals. All these animals in the original balance of things not only used that land, but helped to extend its total salad-producing acres. They trampled, they spread seeds, they increased the soil products. Vegetable mould increased. The little drops of water fell on it, and plants grew again on the pleasant land. The Saurus family moved in and permanently frequented the head lettuce, cabbage and turnip greens of that day.

All went merry as a marriage bell, until, in time, Man came along. The old ways did not suit him. He began to farm, at first by means of a

crooked stick, and at last by means of the Harvester Trust. Incidentally, he forgot all about the buried years, and, with a skill and speed and malice which would have caused any self-respecting Saurus to blush with shame, did all he could to wreak destruction upon the forests of the earth, on the mines, on the waters, and on the soil itself. He overdrew his bank account, more in America than ever has been known in all the long, slow history either of the world or of the earth.

It would not be worth while to make here merely a series of sweeping general statements, or to make statements not definitely understandable. As it happens, the chapter and verse are ready at hand. It is entirely feasible not only to recognize the waste in American soil, but to measure

What happens when the wooded cover is removed from the land. Erosion sets in; and the land turns a bare, unsmiling face toward the sky. Vegetation can get no foothold. The world has lost some of its power to feed its people.

it. The late Professor N. S. Shaler estimated the destruction of agricultural lands, chiefly through old-field erosion, in the southern Atlantic and Gulf States at several thousand square miles; and in portions of this regions the waste involves a complete removal of a superficial geologic deposit, well adapted to forming a productive soil, from underlying older formations ill suited to the development of fertile soils and subsoils; in which case the loss is irremediable.

Other estimates of soil-waste rest on the determination of soil-matter transported by our running waters. The most extensive measurements of this kind were those of Generals Humphreys and Abbott, made on the Mississippi over half a century ago. These showed that the Mississippi then carried annually into the Gulf something over four hundred million

tons of solid matter, in addition to great quantities of earth-salts, carried in solution, and of sand or other coarse material rolled or swept along the bottom.

At the time of these determinations settlement in the Mississippi Valley was comparatively limited, and, as shown by local observations on different rivers, the effect of extending agriculture has been to *increase* the soil-matter carried by the Mississippi *fully twenty-five per cent;* while comparative determinations made on several other streams indicate that the rivers of the country outside of the Mississippi basin carry into the sea about as much soil-matter as the great river itself—that is, that the annual soil-wash of the United States aggregates fully one billion tons! Our balance of trade is going some, isn't it? Also, unfortunately, our soil, which raised that balance of trade, is going some.

A fraction of the matter transported by the waters is coarse (sand and gravel), but fully ninety per cent consists of rich soil-stuff washed from the surface or leached from the subsurface of fields and pastures and (in less degree) of woodlands. Reckoned on the basis of value as fertilizer, the material could hardly be appraised at less than one dollar per ton; so that the annual loss to the agricultural interests of the country can hardly fall short of a billion dollars—equivalent to an impost as great as most other taxes combined, and one yielding *absolutely no return.* It is worse than that. Most of us have known stocks to pass a dividend. How would we feel if the whole stock and everything back of it were wiped out? What would we think of the management that allowed such an event to happen? But this is happening, and under our own management.

The foregoing are estimates made by a United States soil expert. Other competent Government authorities can offer us definite food for additional thought, if we care to hearken. The greatest loss of our soil, we are told, is from *preventable* erosion. The total soil-wash of the country is a billion tons a year. This would make a pile of adobe as high as the Washington Monument and a *mile long* on each of the four sides! Cleared and plowed lands, the source of food products, are the ones which suffer.

Most of the soil-wash—at least seven hundred and eighty-five million tons every twelve months, probably—is dumped into the ocean and lost forever. This would fill four channels as big as the Panama Canal, according to the original specifications. So says the cold-eyed soil expert.

Four hundred million tons of soil are washed from the borders of the Mississippi and Missouri rivers and their tributaries every year and poured as mud into the Gulf of Mexico. So says the wild-eyed Washington statistician.

Muddy waters carry more impurities than clear, and so endanger health more. They have greater power for cutting away the banks of streams. Deposits in the channels, drifting sand-bars and changing courses are caused entirely by *silt in muddy streams.* Had you ever thought of that? Read the hymn backward. Thrown out of balance, water and sand *un*-make the pleasant land.

From the State of Missouri alone enough soil is carried away annually to make a prism one mile square and six hundred feet high. The Missouri River bears into the Mississippi every twelve months enough earth to make a mud-pile a mile square and four hundred feet high. The billion tons of soil which are washed away every year would spread a layer like Nile mud over Indiana, Illinois or Iowa. But what good does it do buried in the depths of the mighty ocean? It may help some future Saurus family, but it won't help yours.

Whole towns have been washed away by the change of currents in silt-laden streams. In some neighborhoods an entire farm has been taken up and carried across to the other side of a river. Within the past year the town of Pine Bluff, Arkansas, was threatened with destruction, many of the buildings toppling over into the turbid flood.

Bad plowing is the cause of a great deal of soil-waste. The farmer of America each year digs a Panama Canal with his little plow. Each year he digs out of the heart of his little forty, eighty or one hundred and sixty acres of land a block of dirt really bigger than the entire cut of the whole Panama Canal. The riches of his farm take wings. He did not see them go. He does not understand that he is literally plowing his farm into the mighty ocean. Not only do we waste, *but that waste accelerates each year.* That is the horrible feature of all these resource-wastes—they increase geometrically with awful swiftness. The buffalo went "all at once." The trees, the fish, the ore, will go "all at once." We do not like high prices, but higher prices than we now can dream are coming to us Americans unless we can get down to a practical basis on religion, politics and business—unless we can understand that little old hymn we used to sing.

When ax and plow work together as agents of destruction and not as creative influences, then we are not using good business sense. Yet that is what we have done—ripped the covering from the soil, and then ripped off the soil itself. In that way we destroyed a primary value. In that way, also, we raised the price, cut down the supply of food, of clothes, of habitation, for the average man. The average American has let a few men steal him blind, and now he is stealing himself blind. The soil is the connecting link between organic and inorganic life. It is the foundation of organized society and of all civilization. It is not only our bank account, but more—it is the place where all the bank accounts *come from.*

Any man who touches the soil, and even the city man who does not, ought to understand it. The main truths are simple enough, like most big things. It is easy to see that depth of soil, and therefore richness in product, is inverse as to slope, because the soil washes thin on the hillsides and runs thicker on the flat. Therefore, on the flats it raises more vegetation, which in turn furnishes more mulch, which in turn holds more moisture, which in turn produces more vegetation. The great circle of the conservation of forces is a simple and beautiful thing.

A truck garden ruined by flood. The fertile soil carried away, leaving gullies in some places and great piles of driftwood and gravel in others.

Slope, water supply, organic action, all these govern soil as in the days of the Saurus family. That is the Hymn of Life. Good plowing is good religion. Good politics is good religion. Good business is good religion. Good geology is good religion, too, and the circle runs around and around, beautiful and complete, if only we care to look at it in that way.

When the Government gets the little drops of water regulated in Wall street, and when we begin to understand the relation of those little drops and little grains on our farm, we shall begin to see in America the arrival of a golden age, one of growth in art, in beauty, in mentality, in altruism. Even at this stage of our development we ought to have

intelligence equal to that of the average Ichthyosaurus. What Uncle Sam is trying to show us is, that without water there is no civilization, and that without proper relation of water and soil there is industrial anarchy. Bad handling of water means less crops, less soil, more polluted streams, more choked up channels, more floods, more waste and ruin, the balance of things thrown out of plumb, and the world literally turned upside-down. The Hymn of Life is one which in time the great Teacher of the Universe is going to force us to remember, whether we

A rich, alluvial farm, destroyed by a freshet.

wish to remember it or not. It is not Washington, but the Universe, which is handing a message to us.

What, then, ought we to do to get out of the Ichthyosaurus class and to give our beneficent protective tariff something to protect? In the first place, it is not up to Uncle Sam, but up to us. Louis XVI. said, "The State, it is myself!" That was in France, and some time ago. The State, it is ourselves, here in America. The remedy does not begin with your neighbor, but with yourself, and with you it begins as soon as you realize that no bank account will stand perpetual checking against it. Uncle Sam is willing to help any one of us begin the study of the soil to-day.

The soil experts of the Government are no more able to classify farms than the average farmer—every farmer knows that there may be heavy, sticky soil; thin, light, sandy soil; clay soil; open and friable mould. Any farmer knows that the great idea is to retain the natural moisture under the soil and not let it run off on the surface. The experts show that deep plowing is a good thing in certain soils, to get the water down into the earth. If the land is very flat, deep tilling may be necessary to get this surplus water out, so that the soil may drain dry and disintegrate. Most farmers know that, in a general way; but Uncle Sam can teach the average farmer a wrinkle or so as to the right balance of the little drops and the little grains.

On the hillsides which wash so badly, the soil expert says, we ought to study contour farming, as it is called. A vertical or slanting furrow will soon become a vertical gully. The horizontal furrow at the same elevation all around the hill has, on the other hand, a tendency to stop the running off of water. Great benefit, also, comes from using strips of grass land, lying in bands of the same elevation around the sides of a dangerous hill. Terracing of farms is new in this country, where we have always just gone West instead. We see the terraces of Chinese and Japanese lands, and suppose they must have been made at the expense of great labor, but in reality it was Time and Nature that made them. The soil which is washed out of the horizontal furrow is in part or in whole stopped when it strikes the edge of the grass land. In many years it banks up more and more. If not controlled it would not bank up, but simply run down the hill and fly away into the mighty ocean.

In rolling lands the canny farmer plants crops toward the tops of the hills to produce cover and mulch, and so to stop wash. He reserves some of his bottom lands for grass, to catch the soil-wash and use it. If he did not, some of his farm would run away, and not only impoverish him, but, perhaps, work injury to his neighbor. It is not good farming to farm every inch of a rich bottom. A few bands of trees would break the driving force of rain. The roots would stand against soil-wash and regulate the flooding which make bottom farming so risky in some localities. The average farmer may not believe in the sense of this, any more than the average lumberman would hesitate to cut away the forest; but the fact remains. Of course, in any very broken country, so says Uncle Sam, there should be forestry mixed with farming; otherwise, the rainfall goes off in torrents. Even Uncle Sam sometimes forgets this, for, after establishing forest reserves, he very often leases them out as sheep or goat ranges. These animals trample little paths, which soon become gullies, which, in their time, become great avenues of waste. I have seen mountains in New Mexico ruined by goats.

For fuller particulars, any anxious inquirer might do much worse than refer to the Department of Agriculture, where many of these great, slow problems are now under careful consideration. As to actual remedy, however, nothing can be done so long as we ourselves remain ignorant or careless in politics, religion and business. We must see higher than the walls of our little grooves. Also, we must see about us in our own little grooves. Waste begins on your own forty acres, right at your door. You are the unit, the individual citizen. From you it is a step up to your hundred, under the old Saxon law. Thence you go to your town, your State, your National Government. Your wish can prevail, if you like, at each and every step of that advance. You can say to that legislator who thinks of himself and not of you, that you would rather have in his place a man who stands for guarded resources, for large reserves of forests, rich soil, a proper water flow, an unimpeded navigation, for fair play all along the line. It all begins with you and me. We have a good country and a good government, but they won't run themselves. The reform of a great many things begins away this side of Washington, District of Columbia. Some of it can begin in the caucus, or the primary, or the forty-acre field. Common-sense and enforced laws now, or the piper to pay after a while—which is better?

At our present nice little industrial gait, here in America, we are burning the candle at both ends, quite regardless of the fact that when it is burnt out, it can never be renewed. Such American fortunes as were made out of theft of America's common resources must surely, one day and in some way, pay the price. But let us little fellows who have not "succeeded" in the world see to it that we keep our own hands clean.

This was a very wonderful and beautiful country. Having seen it before civilization took it all over, perhaps, some of us do not care so much for civilization as we might.

Perhaps some of us would rather be Indians and pray to Chief Mountain, or would rather have been members of the Saurus family, before there was any such thing as taxes and when potato salad was free. Yet here we are, each in his little groove, and, if we have to play the game, we ought to understand the game and know what the game is about.

At least one truth is, we don't own the soil. We borrow it. We ought to hand it over to the successor of our species in as good condition as when we asked the loan. The Saurus family played the game as fair as that with us; and the finest Sauri in the world were raised right here in the United States. Perhaps they didn't forget the hymns they sang.

OUR WATER POWER.

Unquestionably California's greatest asset is her water power. Every year the big, round sun lifts millions of tons from the waters of the Pacific, to be carried eastward by the winds and sprinkled upon ten thousand hills and valleys in the highlands of the Sierras. Slowly it trickles downward, returning to the sea. It is gathered into rivulets, brooks, torrents, that dash faster and faster down the deep canyons and steep gorges in the western flanks of the mountains. More and more we are learning to use the power of these millions of tons as they descend from highlands to lowlands. This power is destined to be the greatest single element in the future development of the State. It is destined to turn the wheels of industry, transport people and products, light and warm the homes of the whole State. It will be an absolute necessity to life and prosperity when oil and coal are gone. Those who control it will be the lords and rulers of mankind.

Up to date our stupid laws give away this precious power forever to any one who wants it, and give him all that he wants, however much—for nothing! Thus we part with our great-grandchildren's birthright, and do not even get a mess of pottage in return. The descendants of us who foolishly part with this power now will pay tribute for centuries to the descendants of the men who get it. These Power Lords will rule over the lives and fortunes of the millions of vassals who must have the Power in order to live.

This Power should be leased, never permanently disposed of. Its title is not rightly vested in us at all. It belongs to the Future. It should never be granted to any one in perpetuity, but for a term of years, a century, if need be; but in perpetuity, never. [E. H.]

"BLIND MOUTHS."

An editorial from Century Magazine, November, 1907. It is a very fine example of scholarly modern English.

Literature is full of trenchant expressions of the recklessness of greed, such as "After us, the deluge!" "Devil-may-care" and "Out of sight, out of mind"—but none of them compares with the lightning-like revelation of selfishness made by these two words of Milton's. Conveying, as they do, the sense of an all-consuming appetite, the very maw of darkness, they would seem to have come from the poet's vituperative prose, rather than from the flowing elegy of the gentle Lycidas.

"What has posterity ever done for us that we should do anything for posterity?" is a saying as striking for the falsity of its suggestion as for the edge of its wit. The most obvious material and natural reasons impel us to work for posterity. Our happiness consists largely in procuring the happiness of our children and our grandchildren, whose happiness in turn will consist in the happiness of their children

and grandchildren. However attenuated this altruistic sentiment may become with further extension, it is enough for practical purposes if it shall reach forward four generations. We bless our ancestors for the building of roads and the planting of trees, and it is what posterity will do for us in the way of benediction that rightly animates any one above the beasts. Indeed, it is hardly too much to say that civilization itself lies in the fact—and to the extent—that "out of sight" is *not* "out of mind."

* * * * * * *

It is with the conservation of the forests that we are here concerned, for without them there would be far less range to administer. Until 1890 our land policy was all steam and no brake. Under a false individualism, due to consideration for the bona fide settler and the Civil War veteran, the larger interests of the region, which included their interests, were forgotten. Recklessness and waste were rampant. By false entries, bribery, and local terrorism millions of acres were acquired and held by individuals and corporations, and what was intended for the homemaker fell into the grasp of commercial exploiters, whose operations have not only left trails of devastation, but have poisoned the politics of many states.

During Mr. Harrison's administration * * * came a new policy. By a legislative provision, passed March 3, 1891, the President was authorized to withdraw from public entry and set apart and reserve in any state or territory such portions of the public lands as might in his opinion be desirable for the preservation of the forests and waters. Then began a campaign of education throughout the country so continuous that he must be ignorant indeed who does not know the impressive reasons why the upland forests must be preserved. The lingering tragedies of those Mediterranean countries—Greece, Italy, France, Spain, and the African coast—which permitted wholesale destruction of their forests, have been rehearsed for our warning

> Till old Experience do attain
> To something of prophetic strain,

while the success of the present far-sighted policies of Germany, France, and other countries have been cited for our encouragement.

* * * The walnut and white pine of the Lake States are virtually exhausted; the leather trust is everywhere decimating the hemlock for tanbark, while the soft woods, saplings as well as larger growth, are being indiscriminately devoured by the pulp mills. Meanwhile, the senseless tariff on lumber tempts the rich companies to further depletion of our resources, rather than permit the builder to buy in the cheaper and inexhaustible market of Canada. Could folly further go?

Reversing the witticism, let us ask, What has posterity ever done to *us that we should* do such things to posterity?

WHEN THE FORESTS ARE GONE.

Teachers of geography and others interested in such matters will find a wealth of good material in a large volume by George P. Marsh entitled THE EARTH AS MODIFIED BY HUMAN ACTION. The following paragraphs give a vivid idea of conditions in certain parts of France. It is the part of wise people to profit by the experience of others, to take warning from others' misfortunes.

"When the forest is gone, the great reservoir of moisture stored up in its vegetable mould is evaporated, and returns only in deluges of rain to wash away the parched dust into which that mould has been converted. The well-wooded and humid hills are turned to ridges of dry rock, the débris from which encumbers the low grounds and chokes the watercourses, and—except in countries favored with an equable distribution of rain throughout the seasons, and a moderate and regular inclination of surface—the whole earth, unless rescued by human art from the physical degradation to which it tends, becomes an assemblage of bald mountains, of barren, turfless hills, and of swampy and malarious plains. There are parts of Asia Minor, of northern Africa, of Greece, and even of Alpine Europe, where the operation of causes set in action by man has brought the face of the earth to a desolation almost as complete as that of the moon; and though, within that brief space of time which we call "the historical period," they are known to have been covered with luxuriant woods, verdant pastures, and fertile meadows, they are now too far deteriorated to be reclaimable by man, nor can they become again fitted for human use."

"The Alps of Provence present a terrible aspect. In the more equable climate of northern France, one can form no conception of those parched mountain gorges, where not even a bush can be found to shelter a bird, where, at most, the wanderer sees in summer here and there a withered lavender, where all the springs are dried up, and where a dead silence, hardly broken by even the hum of an insect, prevails. But if a storm bursts forth, masses of water suddenly shoot from the mountain heights into the shattered gulfs, waste without irrigating, deluge without refreshing the soil they overflow in their swift descent, and leave it even more seared than it was from want of moisture. Man at last retires from the fearful desert, and I have, the present season, found not a living soul in districts where I remember to have enjoyed hospitality thirty years ago."

"It is certain that the productive mould of the Alps, swept off by the increasing violence of that curse of the mountains, the torrents, is daily diminishing with fearful rapidity. All our Alps are wholly, or in large proportion, bared of wood. Their soil, scorched by the sun of Provence, cut up by the hoofs of the sheep, which, not finding on the surface the grass they *require for their* sustenance, gnaw and scratch the ground

in search of roots to satisfy their hunger, is periodically washed and carried off by melting snows and summer storms."

"I will not dwell on the effects of the torrents. For sixty years they have been too often depicted to require to be further discussed, but it is important to show that their ravages are daily extending the range of devastation. The bed of the Durance, which now in some places exceeds a mile and a quarter in width, and, at ordinary times, has a current of water less than eleven yards wide, shows something of the extent of the damage. Where ten years ago, there were still woods and cultivated grounds to be seen, there is now but a vast torrent; there is not one of our mountains which has not at least one torrent, and new ones are daily forming.

"In the days of the Roman Empire the Durance was a navigable, or, at least, a boatable, river, with a commerce so important that the boatmen upon it formed a distinct corporation.

"Even as early as 1789 the Durance was computed to have already covered with gravel and pebbles not less than 130,000 acres, which but for its inundations, would have been the finest land in the province."

BEFORE AND AFTER.

Last summer I went back to visit my boyhood home in Ohio, after an absence of thirty years. One of the most striking changes in the landscape was in the *roofs* of the buildings. They were nearly all of slate instead of shingles. A shingle roof was a sign that the house was a very old one. Even the chicken houses and barns and woodsheds were roofed with slate.

For why, wooden shingles had grown so high priced that slates could be brought from a distant state to compete with them; and the shingles were all made of such knotty, brash, inferior lumber that they rotted away in a short time and were not worth putting on.

Looking further, it was plain that in thirty years the state had changed from a country of wood to a country of clay. Bricks were the universal building material. Tiles were used where bricks were impossible or undesirable. Ceramics was the most important industry of the state. The lumber is gone! The wood is no more! The trees are gathered to their fathers!

I gazed in astonishment at a vast old oaken barn that had been in the scenes of my childhood; and talked with the gray-headed patriarch who owned it. Its sills were beams of solid oak, 24 and 26 inches square, 30 and 40 feet long, and there were scores of them. Away up, high above the tall haymows, were plates and beams by hundreds, all of sound old oak and each big enough for the foundation of a great building. The whole state now would be raked in vain to find the timber

for that one barn. The lumber in it would be worth a huge sum now. But the old man told me it had all been cut from the choice trees of one field, right there—and I looked afar over a bare and treeless plain.

And all Ohio was one great, shaggy forest, only a hundred years ago—dense forests of splendid hardwoods, walnut, hickory, oak, ash, maple, beech, sycamore, poplar. It was *inexhaustible*. The strong and hardy pioneers worked like slaves early and late to cut, burn, clear the land. They were sure the forests would last till the crack of doom.

Only a hundred years have passed; yet the country is bare; and every springtime now we read of the devastating floods of the Ohio; and the soil of the fertile farms continually goes to feed the yellow tides.

[E. H.]

A NEW PATRIOTISM.

This article from the World's Work Magazine is certainly worth thoughtful reading by all Americans. Don't fail to note its fine, patriotic spirit. It is by Gifford Pinchot, who has had every opportunity for twenty years to know whereof he speaks. It is said that he accepts no salary for his work as chief forester of the United States, but turns it back into the treasury for the good of the cause, and devotes the best years of his life to a labor of love.

The people of the United States are on the verge of one of the great quiet decisions which determine national destinies. Crises happen in peace as well as in war, and a peaceful crisis may be as vital and controlling as any that comes with national uprising and the clash of arms. Such a crisis, uneventful and almost unperceived, is upon us now, and unwittingly we are engaged in making the decision that is thus forced upon us. And, so far as it has gone, our decision is wrong. Fortunately, it is not yet final.

The question we are deciding with so little consciousness of what it involves is this: What shall we do with our natural resources? Upon the final answer that we shall make to it hangs the success or failure of this nation in accomplishing its manifest destiny.

Few Americans will deny that it is the manifest destiny of the United States to demonstrate that a democratic republic is the best form of government yet devised, and that the ideals and institutions of the great republic taken together must and do work out in a prosperous, contented, peaceful, and righteous people; and to exercise, through precept and example, an influence for good among the nations of the world. That destiny seems to us brighter and more certain of realization to-day than ever before. It is true that in population, in wealth, in knowledge, in national efficiency generally, we have reached a place far beyond the farthest hopes of the founders of the republic. Are the causes which have led to our marvelous development likely to be repeated indefinitely in the future, or is there a reasonable possibility, or even a probability, that conditions may arise which will check our growth?

Danger to a nation comes either from without or from within. In the first great crisis of our history, the Revolution, another people attempted from without to halt the march of our destiny by refusing to us liberty. With reasonable prudence and preparedness we need never fear another such attempt. If there be danger, it is not from an external source. In the second great crisis, the Civil War, a part of our own people strove for an end which would have checked the progress of our development. Another such attempt has become forever impossible. If there be danger, it is not from a division of our people.

Our Third National Crisis.

In the third great crisis of our history, which has now come upon us unawares, our whole people, unconsciously and for lack of foresight, seem to have united together to deprive the nation of the great natural resources without which it can not endure. This is the pressing danger now, and it is not the least to which our national life has been exposed. A nation deprived of liberty may win it, a nation divided may reunite, but a nation whose natural resources are destroyed must inevitably pay the penalty of poverty, degradation, and decay.

At first blush this may seem like an unpardonable misconception and over-statement, and if it is not true it certainly is unpardonable. Let us consider the facts. Some of them are well known, and the salient ones can be put very briefly.

The five indispensably essential materials in our civilization are wood, water, coal, iron, and agricultural products.

We have timber for less than thirty years at the present rate of cutting. The figures indicate that our demands upon the forest have increased twice as fast as our population.

We have anthracite coal for but fifty years, and bituminous coal for one hundred.

Our supplies of iron ore, mineral oil, and natural gas are being rapidly depleted, and many of the great fields are already exhausted. Mineral resources such as these when once gone are gone forever.

We have allowed erosion, that great enemy of agriculture, to impoverish and, over hundreds of square miles, to destroy our farms. The Mississippi alone carries yearly to the sea more than 4,000,000,000 tons of the richest soil within its drainage basin. If this soil is worth a dollar a ton, it is probable that the total loss of fertility from soil-wash to the farmers and forest owners of the United States is not far from a billion dollars a year. Our streams, in spite of the millions of dollars spent upon them, are less navigable now than they were fifty years ago, and the soil, lost by erosion from the farms and the deforested mountain sides, is the chief reason. The great cattle and sheep ranges of the West,

because of over-grazing, are capable, in an average year, of carrying but half the stock they once could support and should still. Their condition affects the price of meat in practically every city of the United States.

These are but a few of the more striking examples. The diversion of great areas of our public lands from the home maker to the landlord and the speculator, the national neglect of great water powers, which might well relieve, being perennially renewed, the drain upon our non-renewable coal; the fact that but half the coal has been taken from the mines which have already been abandoned as worked out and in caving-in have made the rest forever inaccessible; the disuse of the cheaper transportation of our waterways, which involves but little demand upon our non-renewable supplies of iron ore, and the use of the rail instead—these are other items in the huge bill of particulars of national waste.

The Disregard of the Future.

We have a well-marked national tendency to disregard the future, and it has led us to look upon all our natural resources as inexhaustible. Even now that the actual exhaustion of some of them is forcing itself upon us in higher prices and the greater cost of living, we are still asserting, if not always in words, yet in the far stronger language of action, that nevertheless and in spite of it all, they still are inexhaustible.

It is this national attitude of exclusive attention to the present, this absence of foresight from among the springs of national action, which is directly responsible for the present condition of our natural resources. It was precisely the same attitude which brought Palestine, once rich and populous, to its present desert condition, and which destroyed the fertility and habitability of vast areas in northern Africa and elsewhere in so many of the older regions of the world.

The conservation of our natural resources is a question of primary importance on the economic side. It pays better to conserve our natural resources than to destroy them, and this is especially true when the national interest is considered. But the business reason, weighty and worthy though it be, is not the fundamental reason. In such matters, business is a poor master but a good servant. The law of self-preservation is higher than the law of business, and the duty of preserving the nation is still higher than either.

The American Revolution had its origin in part in economic causes, and it produced economic results of tremendous reach and weight. The Civil War also arose in large part from economic conditions, and it has had the largest economic consequences. But in each case there was a higher and more compelling reason. So with the third great crisis of our history. It has an economic aspect of the largest and most perma-

nent importance, and the motive for action along that line, once it is recognized, should be more than sufficient. But that is not all. In this case, too, there is a higher and more compelling reason. The question of the conservation of natural resources, or national resources, does not stop with being a question of profit. It is a vital question of profit, but what is still more vital, it is a question of national safety and patriotism also.

We have passed the inevitable stage of the pillage of natural resources. The vast wealth we found upon this continent has made us rich. We have used it, as we had a right to do, but we have not stopped there. We have abused, and wasted, and exhausted so much that there is the gravest danger that our prosperity to-day will have been made at the price of the suffering and poverty of our descendants. We may now fairly ask of ourselves a reasonable care for the future and a natural interest in those who are to come after us. No patriotic citizen expects this nation to run its course and perish in a hundred, or two hundred, or five hundred years; but, on the contrary, we expect it to grow in influence and power and, what is of vastly greater importance, in the happiness and prosperity of our people. But we have as little reason to expect that all this will happen of itself as there would have been for the men who established this nation to expect that a United States would grow of itself without their efforts and sacrifices. It was their duty to found this nation, and they did it. It is our duty to provide for its continuance in well-being and honor. That duty it seems as though we might neglect. Not in willfulness, not in any lack of patriotic devotion, when once our patriotism is aroused, but in mere thoughtlessness and inability or unwillingness to drop the interests of the moment long enough to realize that what we do now will decide the future of the nation. For, if we do not take action to conserve the natural resources, and that soon, our descendants will find them gone.

Let me use a homely illustration: We have all known fathers and mothers, devoted to their children, whose attention was fixed and limited by the household routine of daily life. Such parents were actively concerned with the common needs and precautions and remedies entailed in bringing up a family, but blind to every threat that was at all unusual. Fathers and mothers such as these often remain serenely unaware while some dangerous malady or injurious habit is fastening itself upon a favorite child. Once the evil is discovered, there is no sacrifice too great to repair the damage which their unwitting neglect may have allowed to become irreparable. So it is, I think, with the people of the United States. Capable of every devotion in a recognized crisis, we have yet carelessly allowed the habit of improvidence and waste of resources to find lodgment. It is our great good fortune that the harm is not yet altogether beyond repair.

The profoundest duty that lies upon any father is to leave his son h a reasonable equipment for the struggle of life and an untarnished ne. So the noblest task that confronts us all to-day is to leave this ntry unspotted in honor, and unexhausted in resources, to our cendants, who will be, not less than we, the children of the founders the republic. I conceive this task to partake of the highest spirit of riotism.

LEARNING FROM HISTORY.

The following is an extract from a paper by A. B. Benton, before the Trinties Reforestation Committee, in Southern California. It certainly affords d for thought.

The editor of one of our great weekly journals has written: "Probly the works for which President Roosevelt will be longest remembered his efforts for the conservation of our national natural resources." The fountains must be renewed, the field must be planted, the fire ıst be checked, and by us or we will justly merit the contempt of ınkind. We are not the first, but the last of the nations who have ıandered their birthright. The splendid nations of old time, Egypt, bylonia, Asia Minor, Greece, India, China; where our race began its reer, where the arts and letters and commerce and architecture were rn and flourished in glorious achievement for centuries and centries—do you think their lands were sterile then? Do you conceive em as poorer in lavish gifts of nature than is our land? Do you ppose the teeming millions of their inhabitants so prospered in the serts which we find there now? Believe me, the deserts there are of n's making, and their desolation was brought about by their own nds. We look on the poor ruins of these once mighty empires with a nplacent pity, but I have little doubt that the spirits of the men of , if they are cognizant of our doings, have greater reason for a rnful pity than have we, for they began civilization and had little ore their time to take warning, while we, latest of all, I verily believe re been as reckless as any of the great nations, ancient or modern.

There are many, even in this day, who can learn nothing from history their own profit. The world of men for thousands of years has been perimenting with civilization of higher and lower types. Enough their experiences have been written to teach us every lesson we need learn had we the wit to read them aright. The treasures of ancient l medieval research, their economics and philosophy have been opened this age a thousand fold more widely than to any age whatsoever ore us. If it, with the histories of the good and bad of all ages before not in dead languages, nor locked in secluded temples and cloisters, in its living tongues, and in multiplied libraries—if, with all this

before it, it follows the blunders and mistakes and follies of the old ages because it will not see, and seeing learn, then our civilization deserves not only to perish as miserably as the most miserable failure of them all, but will richly merit the epitaph of Justice Dogberry to "be written down an ass!"

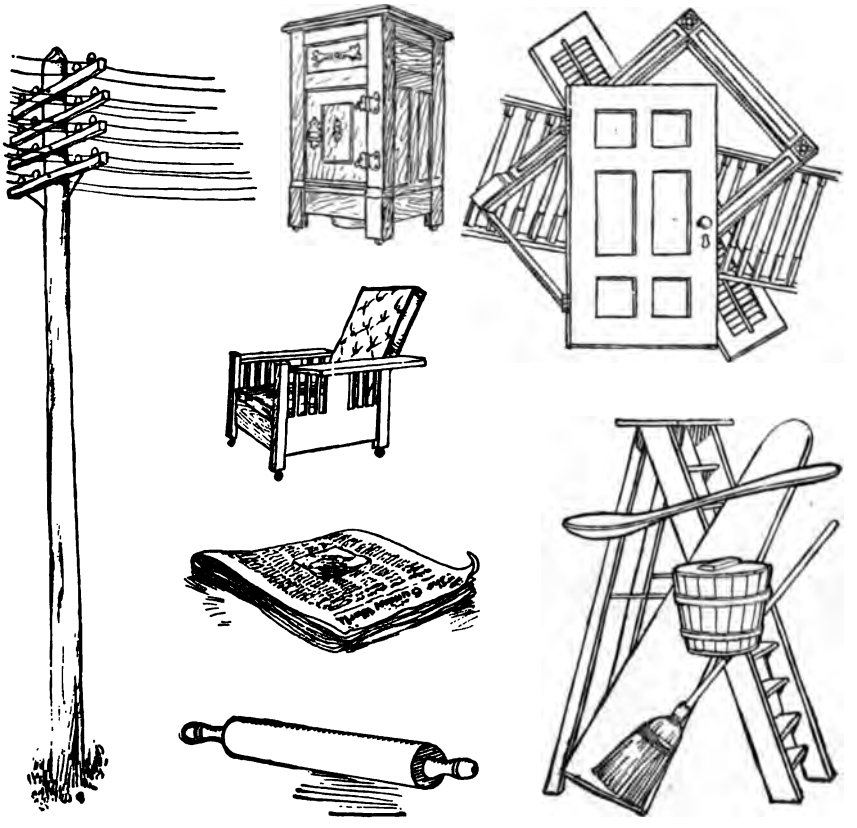
We voters of America are the bankers of the nation's resources. Infinitely more valuable is our trust than that of money, stocks or bonds, because once dissipated, it may not be replaced. If we are to preserve for our children the heritage we received from our fathers, we must alarm the people out of their thoughtless indifference. Public thieves must be punished, fires must be checked, individual rights must be purchased when demanded for the public good. Wantonness of waste by careless owners and destructive greed for immediate gain by selfish owners must be controlled. This is a mighty task, more difficult than some of the greatest our ancestors performed in the old days. But if it be not accomplished, the shame of defeat will rest on this generation, for this is preëminently our battle. We may not throw its burden backward to our fathers, or forward to our children. The former could not see its swift coming, the latter will have little to fight for if we fail in preserving for ourselves and them the resources by which only we or they can win continued prosperity.

THE CITIES, TOO.

The following appeared only a few days ago, an editorial in a San Francisco newspaper. The accompanying pictures show some of the common articles that must double, treble, quadruple in price as wood grows scarce.

The Government's efforts to save the country's forests are impeded by the fact that the city man, who holds the balance of political power, is apt to think that the woods have nothing to do with him. This is a mistake, of course, and is worth pointing out.

It is true that spinach and spring chickens do not grow on forest trees, and that such things come to the city market without much regard



to political opinions. But the preservation of the country's great natural resources of wood and stream is a political issue. And at this point our cockney ignorance and complacency need to be pierced by sane rays of light from the rural world.

In point of fact, the wood supply is next in importance to the food supply. It is probably more indispensable than the supply of iron or coal.

The cost of living—and consequently the standard of living to which city people of ordinary incomes can aspire—is seriously affected by the state of the wood supply.

In view of such considerations no San Franciscan should read with listless eyes such statements as those contained in a recent bulletin of the National Forest Service.

We learn by this document, for example, that an average American citizen uses up in a year seven times as much wood as a citizen of Germany. And we are told that Americans produce on an acre of woodland only a quarter as much as the Germans do.

We are assured by our Government experts that there is no natural reason why we shouldn't grow as good crops of trees in this country as are grown anywhere in Europe. And it is plain that the improvement and perpetuation of the wood supply is a matter of public education—in which city people are bound to bear a leading part.

SOME ASPECTS OF FORESTRY.

From Circular No. 140 of the United States Forest Service, by Treadwell Cleveland, Jr.

Many people in this country think that forestry had never been tried until our Government began to practice it upon the national forests. Yet forestry is practiced by every civilized country in the world, except China and Turkey. It gets results which can be got in no other way, and which are necessary to the general welfare. Forestry is not a new thing. It was discussed two thousand years ago, and it has been studied and applied with increasing thoroughness ever since.

The principles of forestry are everywhere the same. They rest on natural laws, which are at work everywhere and all the time. It is simply a question of how best to apply these laws to fit local needs and conditions. No matter how widely countries may differ in size, climate, population, industry, or government, provided only they have forests, all of them must come to forestry some time as a matter of necessity.

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The countries of Europe and Asia, taken together, have passed through all the stages of forest history, and applied all the known principles of forestry. They are rich in forest experience. The lessons of forestry were brought home to them by hard knocks. Their forest systems were built up gradually as the result of hardship. They did not first spin fine theories and then apply those theories by main force. On the contrary, they began by facing disagreeable facts. Every step of the way toward wise forest use, the world over, has been made at the sharp spur of want, suffering, or loss. As a result, the science of

is one of the most practical and most directly useful of all
ıces. It is a serious work, undertaken as a measure of relief,
tinued as a safeguard against future calamity.
ıly, those countries which to-day manage their forests on sound
es have passed through four stages of forest experience. At
forests were so abundant as to be in the way, and so they
her neglected or destroyed. Next, as settlements grew and the
of the forest receded farther and farther from the places where
as needed and
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est growth, was
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r the general

In the Sierra National Forest. The ranger's horses are waiting for their master. Notice the boards nailed on the trees high overhead. They mark the depth of the winter snows, and show which way to go when the landscape is smothered by its wintry blanket.

including a wiser and less wasteful use of natural resources,
st was safeguarded and controlled so as to yield a constant
m product year after year and from one generation to another.
tic forestry, therefore, applied by the nation for the benefit of
ɔle, and practiced increasingly by far-sighted private citizens,
hen the last lesson in the school of forest experience is mastered.

* * * * * * *

, holds a unique position as the only civilized country which
istently *destroyed its* forests. What forestry has done in other

countries stands out in bold relief against the background of China, whose hills have been largely stripped clean of all vegetation, and whose soil is almost completely at the mercy of the floods. Trees have been left only where they could not be reached. Almost the sole use for lumber is the manufacture of coffins. The heavy two or three inch planks for this purpose are so scarce, and the cost of transporting them by coolies is so high, that they sell for $2 or $3 apiece.

Nowhere in the world is the forest cleaned off down to the very soil as it is in China. When the trees are gone, the saplings, the shrubs, and even the herbage are taken. Slender poles are used to build houses; inconsiderable shrubs are turned into charcoal. In the lower mountains of northeastern China, where the stripping process has reached its extreme phase, there is no trace of anything worthy of the name of forest. In the graveyards and courts of the temples a few aged cedars have been preserved by the force of public opinion, and poplars and fruit trees planted about dwellings are protected as private property by the peasant owners.

In the Tahoe National Forest. The mountain meadows afford continuous pasture for many thousands of cattle under proper regulation. Thousands upon thousands of acres of the splendid pine forests about the lake have been cut down and carried down into the bowels of the earth in the mines of the Comstock Lode.

In the province of Shantung, where deforestation is practically complete, fuel and fodder for cattle are literally scratched from the hillsides by boys who go out from villages with their iron rakes in autumn to secure winter supplies. Grazing animals, searching every ledge and crevice, crop the remaining grass down to the very roots.

A dearth of wood is not the only forlorn result of forest devastation; a dearth of water and the ruin of the soil follow in its train. In western China, where forest destruction is not yet complete, enough vegetation covers the mountains to retard the run-off of the rains and return sufficient moisture to lower levels, where it can be reached by the roots of crops and where springs are numerous. But on the waste hills of eastern China the rains rush off from the barren surfaces, flooding the valleys, ruining the fields, and destroying towns and villages. No water is retained at the higher levels, so that none is fed underground to the lower soils or to the springs. As a result, even on

the plains the water level is too far beneath the surface to be used. Without irrigation and the ingenious terracing of hillsides, by which the rains are made to wash the soil into thousands of miniature fields whose edges are propped up by walls, agriculture would be entirely impossible. Even irrigation calls for the immense labor of drawing the needed water from wells.

Logging under proper principles of forestry. The young trees are uninjured, the brush is piled for burning, some heed is taken to the future.

In a word, the Chinese, by forest waste, have brought upon themselves two costly calamities—floods and water famine.

WHY IS THIS?

As these words are written (January, 1909), the richest agricultural region of California is being devastated by flood. The Sacramento River stands over twenty-nine feet above low-water mark at the Capital of the State—the highest that it has ever been. The fertile islands in the vast delta of the Sacramento-San Joaquin river system are one by one going under the waves, although their levees are higher than ever before, although they were built up and patrolled and fought for with all the determination, enterprise, devotion that human nature is capable of. Tens of thousands of acres already are lost.

Why is this? Why should the waters be higher than ever before?

Is the rainfall greater? Is there more snow than in bygone years? No. The reason lies in the folly and improvidence of man. We cut and burn away the forest cover on the Sierras so that they can no longer hold back the waters for the summer streams. We wash the soil upon which our future prosperity depends into the channels of our rivers, choking them and raising them above the level of the land. [E. H.]

THE VITAL TRUTH.

Stewart Edward White, the noted writer of camping and outdoor stories, lives in Santa Barbara. Even his honeymoon was spent in the open, in a horseback trip through the high Sierras round about Mount Whitney. He has written a fine article for the American Magazine for January, 1908, under the caption THE FIGHT FOR THE FORESTS, from which the following is extracted, by permission.

"When a man makes his camp in the wilderness he hunts first of all two requisites. If they exist in abundance, he is happy and comfortable; if they lack, he must take his rest, and move on to more favored localities. These two requisites are wood and water.

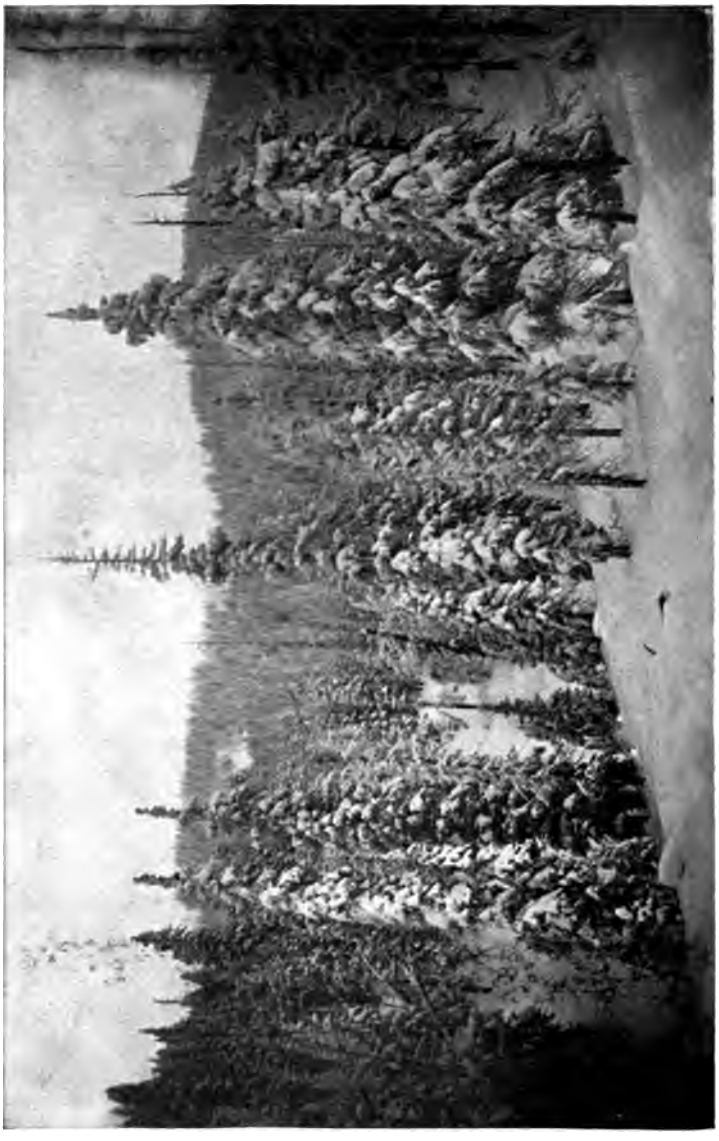
How the forests hold back the water and check the floods and keep the streams from washing their *bank* away.

And, curiously enough, these two necessities of man's abiding depend absolutely one on the other. Without rainfall the forests will not grow. Without the forests the rainfall is destructive, rather than beneficent. In a naked country—whether artificially or naturally so—the water comes in great torrential floods followed by droughts. A covering of forest, on the other hand, retains the rainfall as would a sponge, distributing it slowly through regulated streams, holding it back

A hill that has lost its wooded cover, and is therefore losing its soil by erosion. Nothing here to check the floods, or hold back the life-giving water.

This mountain slope was logged over many years ago. Observe that it does not reproduce forest cover, *but* remains a bare, parched region, at the mercy of sudden *flood and summer heat.*

against the needs of the dry season. Wherever the forests have been cut away, we are treated each spring to destructive floods, as has been many times proven in the valleys of those great rivers draining the sites



How the forests of our high mountains hold the snow fall, preventing its sudden melting, to the destruction of the cultivated valleys below.

of the old pine forests in the East. Contrariwise, in California, when the necessities of irrigation cause the people to pay great attention to such matters, it has been found by actual measurement that the stream *flow has increased* twenty-five per cent since the establishment of efficient *protection for* the forest cover.

ince these things are so, it follows naturally that sooner or later ions would see through the haze of immediate expediency to the vital th, forced home boldly on the individual camper. From this realiza- ı would come a system of forestry.

n Switzerland we find the earliest intelligent treatment of the ques- ı. Switzerland's mountainous situation would have rendered her uliarly liable to complete extinction by flood, avalanche and the sion of the agricultural soil, once the natural protection was removed. : to-day Switzerland is prosperous and very much alive. Over one usand years ago she possessed a forest system, and had developed a ntific forestry by the fifteenth century. As early as Louis XIV. ınce awoke to the fact that her forests and her life were draining ıy together. But it was too late. To-day she is spending $34 an ə to reforest her watersheds. The same experience is costing Italy an acre. Italy is not a wealthy nation; yet she is appropriating erfully this enormous sum in the realization that on it depends the stion as to whether or not she will have to strike her tents. If we :he United States were called upon to replace at even Italy's figure trees now growing on the watersheds protected by our reserves, we uld have to spend about three billion dollars!

Only a few years ago the forest was our enemy here in America. ery step of the way must be cleared by the pioneer's axe and guarded his rifle. A tree was a foe to be got rid of as expeditiously as sible. To ingrained and inherited hostility succeeded indifference, ch is but just beginning to yield ground to a more enlightened senti- ıt. This enlightened sentiment further encounters determined and crupulous opposition from the land-grabbers, the lumber stealers, candidates for free grazing, and all the rest of the various pirates parasites that prey upon and cling to the rich spoils of our public ıain.

OUR NEIGHBOR'S FORESTS.

he Government of British Columbia has put into forest reserves at strike a hundred and fifty million acres—five eighths of all the land he province. In British Columbia the lumberman who wishes to trees must deal with the Government, whose enlightened policy, ng the people the control of their timber resources, is carried out :he local government of the province, unlike some of our Western es, which hang back in sullen protest while salvation is forced upon ı by a distant national authority.

CALIFORNIA TAN OAKS.

One of the most shocking sights in the waste of the fuel resources of this State is the method of harvesting tanbark. Thousands of square miles of our north coast region were covered by fine oak trees. To get the bark the trees are first cut down and then peeled. The bark is taken out by wagons or pack animals and sold by the cord. But the trees themselves—the massive trunks and limbs—are left to rot unseen in the undergrowth or to feed a forest fire. Millions of feet of solid oak timber were thus destroyed every year. The lumber corporations, in buying up timber land, figure the oak trees in *cords of tanbark*—the trees themselves count as nothing. The profit on the bark is not large, as it takes a deal of labor to get it out. [E. H.]

A CONTINENT DESPOILED.

Rudolf Cronau is a well-known artist and writer, of German ancestry. Under the above title he has written a vivid article in the American Magazine for April, with the following introduction.

On my writing-desk lies a pile of photographs, some taken with my own camera, some obtained from friends or through the courtesy of the United States Forest Service and the Geological Survey. Besides, there are maps and papers covered with statistic figures.

If you look over this collection, you will be struck with horror, for these views disclose scenes so repulsive, that, if they were not photographs, you would believe them products of the sickly brain of some artist like the famous Belgian painter Wuerz, or the Russian Wereschagin, who, with cruel pleasure, indulged in portraying only the most unpleasant and disgusting scenes of this world.

Let us take up a few of these photographs.

Here we have the gloomy view of a forest destroyed by fire. As far as the eye can penetrate the picture, you see hundreds and thousands of straight black trunks, pointing as so many big needles toward heaven. There is not a limb left on one of the trees. Every branch is eaten away. And not a living thing is seen in this dreadful wilderness, nor will anything flourish there for years to come.

This second picture discloses another scene of devastation; a primeval forest as it was left by lumbermen after they had taken out the choice timber. What reckless barbarians these men have been! Everywhere we see the unmistakable evidences of frightful waste. The ground is covered with fragments of noble trees, and with young saplings crushed to pieces by fallen timber.

The next photographs show deforested hillsides and farm-lands, damaged by rain-storms which gnawed deep gullies into the naked ground

and carried away all fruitful soil. And here we have villages and cities suffering by the flood of rivers. The water reaches into the first and second stories. Mills and houses have been swept away and landed on distant places.

After that we look into a bird's nest, in which we see a heap of young birds, dead from starvation. Another of these ghastly photographs affords a glance over rocky shores, strewn with the putrid bodies of thousands and thousands of seal pups, who perished while waiting in vain for the return of their slain mothers.

And then we see horrible views showing long rows of human corpses, distorted by explosions, burned by fire, crushed by fallen rocks, or maimed by railway engines or street cars.

There are dozens and dozens of such repulsive photographs. If thrown as lantern slides upon a screen and explained by a lecturer, this collection of views, maps, and figures would cause a cry of terror among the panic-stricken audience, and many, shocked to the bottom of their hearts, would leave, never to forget that horrible exhibition.

You ask where these photographs have been taken and what the whole collection means. As an American citizen, I feel ashamed to say that all these views, without exception, were made from actual scenes in the United States, and that, together with the maps and statistic tables, they are incontrovertible and convicting evidences of grave sins of which our nation is guilty. Some of the material has been used in preparing my little book, "Our Wasteful Nation," which is not an outcome of yellow journalism, dealing in sensations, but the honest work of a man who loves this country fervently as any native-born American, and who is inspired by the wish to help it along, that it some day may gain the proud title, the best among all lands.

Perhaps native-born American writers are so accustomed to the extravagance of American life, that they fail to see the amazing amount of our prodigality, which to the stranger becomes evident at once.

THE WATERFOWL.

Another of California's resources that is being rapidly gathered to its fathers is the wild game, particularly the waterfowl. A few years ago they seemed as "inexhaustible" as the leaves on the trees. But now 100,000 licenses to hunt are taken out in a year. If each of these guns should bring down the limit for only one day, it would mount up to a total of millions. In the Sacramento Valley four men have killed 700 geese in a day. The "bull hunters" of Merced County often kill over a hundred ducks at a single discharge. Nearly every day during the hunting season at Los Banos a dray load of ducks goes away by express, packed in *gunny sacks, the* legal limit—35 ducks—in each sack.

Of course, this valuable resource will soon disappear under such onslaughts. Of course, the "Game Hogs" should be suppressed, the game commission should be upheld, the laws should be enforced, so that wild fowl will not entirely disappear from our inland waters.

The same things may be said of our fishes. It does not seem possible that so delicious and valuable a fish as the salmon would be killed and

A Single Gunner and His Kill

In the lowlands of California it is often said that a man can kill so many birds he "can't get them all in one pile."

used for such gross purpose as fertilizer; yet in the early days of the northwest the farmers planted a splendid salmon under each hill of their hop fields, to enrich the soil. In 1906 the Alaska Guano Company converted 18,000 barrels of salmon and 33,500 barrels of herring into fertilizer and sold it.

The heroic efforts of the Fish Commissioners can hardly hope to keep pace with the reckless and illegal fishing of the fish hog and the market fisherman. [E. H.]

FUTURE OF MAN IN AMERICA.

One of the wisest and best informed men of our country is President Van Hise of the University of Wisconsin. Since this work has been in press (June, '09) he has printed in the World's Work Magazine a comprehensive article on Conservation, which closes as follows:

"It would be interesting, but idle, to prophesy as to the changes in our social structure which will result when people begin to be pinched by meagre soil, by lack of sufficient coal and wood. The people of that time will doubtless solve their problems as best they may, and any speculations we might make at this time would certainly be far from future realization, but that the problems of pinching economy will confront our descendants is beyond all question; and, therefore, the paramount duty remains to us to transmit to our descendants the resources which nature has bequeathed to us as nearly undiminished in amount as is possible, consistent with living a rational and frugal life. Now that we have imposed upon us the responsibility of knowledge, to do less than this would be a base communal crime."

A PRACTICAL VIEW.

From an article by H. Von Schon, a hard-headed working engineer, in Engineering Magazine, October, 1908.

"A bare, hard-baked surface absorbs but little water; a forested area with its deep layer of leaves, brush and humus is a sponge which becomes saturated with the water; it is a natural storage reservoir. The rapid storm surface run-off erodes the top soil and carries it in suspension, dropping it somewhere in the lower channels; timbered slopes obstruct this surface run-off; it gathers force but slowly; it finds no loose earth or gravel to carry along; the foliage canopy of the trees breaks the force of the downpouring rain, which reaches the ground gradually; finally, the snowfall on the open hillsides melts quickly under the influence of the wind and the sun, while that in the forest remains to melt gradually and then to sink into the ground.

"That water waste with its collateral flood destructions of life and property, the constantly increasing erosions of the fruitful top soil, and the consequent impoverishing of what remains, and the sedimentation of river channels, are primarily caused by the cutting away of the forests in the headwater regions of rivers, was recognized and acted upon by some of the European peoples hundreds of years ago; little Switzerland enacted a forest-conservation statute as early as 1680, which has been enforced in a most business-like manner since; 20 per cent of the mountain republic's area is in conserved forests, some

2,000,000 acres; the cost of maintenance and supervision is $1.32 and the net revenue, $2.25 per acre annually.

"Germany's forest area is 35,000,000 acres; its system of forest preservation was inaugurated one hundred and fifty years ago. France has 23,000,000 acres of forests, all under admirable preserve laws. The combined population of these two countries exceeds that of the United States about 15,000,000. They now expend annually on forest preservation some $11,000,000 and enjoy a net revenue of about $30,000,000. while the United States forestry expenditures last year aggregated $1,400,000 and the revenue $130,000."

THE SLAUGHTER OF THE TREES.

[Copyright, 1908, by the Ridgeway Company.]

Part of a striking and vivid article by Emerson Hough in the May number of Everybody's Magazine. Its startling statements appear to be substantially correct. Everybody's has kindly given permission to use this article and several of the pictures accompanying it.

In fifty years we shall have whole States as bare as China. The Appalachians will be stripped to bedrock. The Rockies will send down vast floods, which can not be controlled. The Canadian forests north of the Great Lakes will be swept away. Our Middle West will be bare. The Yazoo Delta will be ripped apart, because no levee will be able to stand the floods of those days. We shall be living in crowded concrete houses, and at double the rent we now pay. We shall make vehicles of steel, use no wood on our farms. We shall pay ten cents for a newspaper, fifty cents for a magazine, as much for a lead pencil. Cotton will be immensely higher. Beef will be the privilege of the few. Clothing will cost twice what it costs to-day. Like Chinamen, our children will rake the soil for fuel or forage or food. We shall shiver in a cold, and burn in a heat, never before felt in this temperate zone, meant by God as a comfortable growing place for splendid human beings—UNLESS WE WAKE UP.

My friend, yesterday a man took the meat from your table. To-day a man burned down your house. Do you care?

My friend, yesterday this was America, a rich and beautiful land. To-day much of it is a waste and a wilderness. Is that anything to you and me?

My brother, in ten years a man is going to force you to rent a house of him, and to pay double what you do now. In twenty years very few of us will be able to afford even rented houses. In thirty years America will no longer be able to build houses of wood—unless you shall meantime remember that you own America, you who found it, fought for it,

and who ought to have a pride in it, if only for the sake of what it might have been. Does this cause you any personal concern?

My friend, before a certain great revolution, the peasants who could not own timber of their own, gleaned firewood in the forests of nobles, who swept their backs with the lash of insolence. In England men once prized the scant right to reap with peasant's billhook or shepherd's crook as high as they could reach among the dead branches of the trees. Soon you will perhaps fight among your kind and kin for the right to glean in another man's forest by hook or crook—you, who but now owned the widest and richest forests in the world. Do you care?

In Europe one may not fell a tree without paying, without asking. As Americans, we laugh at such restrictions. We are fools. Do you care? We call this the land of the free. It is not such now. We boasted of our land of opportunity open to all the world, but opportunity has been taken from the average man. Do you object?

Do you think such statements as these sensational, brutal, coarse? My brother, what pen shall be so bitter and abominable as shall make you writhe and say, "This is not true," and then make you look around and find that it all is true, and more is true?

When we first owned this country, one half of its total area was covered with the grandest forests that ever grew in any portion of the world—the richest, the most useful, the most valuable for the building of a civilization. Yes, we had trees. We had forests that set the first writers who saw this country wild with admiration, men who came here from reforested Europe. They were all ours. Now they are gone. Are they reared in lasting structures of a great civilization? No; at least one half of them are ashes or rotted mould. Half of what we have left to-day also will be ashes or rotted mould. They will never rest in the beams and walls of abiding homes.

Had we gone on across this continent and left the remnants of our standing woods, we still should have abundance; but we have gone back a second and a third time, gleaning more exactly each little bit of wood, until we have reaped our forests as sheep reap the grass lands, leaving nothing behind to grow. We have used ever-increasing appliances for speed and thoroughness, to supply an ever-increasing demand, at an ever-increasing price. We are converging in ever-increasing numbers, with an ever-increasing zeal, upon what is left; and in our haste to get it all, we are permitting an ever-increasing waste and ruin of the original supply.

Our very classification shows how sweeping has been the devastation. We now classify as "pine" all sorts of pine—Norway pine, Jack pine, pitch pine—although we know that true white pine, once the only wood dignified with the name, is, as a great lumber tree, practically an extinct *species*. *As to the* hardwoods, twenty years ago we used only

oak, walnut, hickory, cherry, maple, birch; now we add cottonwood, beech, sycamore, all sorts of gum trees, anything that will saw into a board. The desolation in the hardwood forests of the South is as unspeakable as in the pine forests of the North. Stave-makers, tie cutters, vehicle and machinery makers, have ripped open the hardwood regions of Tennessee, Mississippi, and Arkansas, until the end is as close there as it is in the vaster pine woods.

On the Pacific coast we used not long ago only the finest of redwood, gradually then the Douglas fir or spruce. Now we cut in the West hemlock, cedar, lodge-pole pine, anything that will hold a saw blade. For a long time we thought these great Western stores exhaustless, just as not long ago we thought the forests of Michigan and Wisconsin exhaustless, where now remains in great part only a horrible wilderness.

All the time poorer species and grades of timber are employed all over America, East and West. All the time the "estimates" of our remaining timber increase. But all the time the standing trees themselves decrease; all the time the fires rage; all the time the waste goes on, immense logs, the butts of giant trees, being left in the woods to rot because it does not pay to get them out of the woods "at the present price of lumber." All the time the loss to the people of America goes on, and the price to the people of America goes up; and all the time the people of America either do not know or do not care.

We ought to care, and if we know the facts no doubt we should care. What, then, are some of the facts? Plenty of facts, and very obvious ones, lie at hand for any one interested in any sort of building or manufacture requiring the use of lumber. What was $8 or $10 is now worth $25 to $30 a thousand. Ordinary clear building and finishing lumber costs from $30 to $125 a thousand. The price of all lumber has in five years risen over fifty per cent. We use lumber now that twenty years ago would have been rejected with scorn by any builder. Yet prices are going up, and still up; and the lumbermen wish these prices "protected," and ask that the Sherman law be revoked. In spite of these facts, the professional optimist in lumber attempts to soothe us with the assurance that there is plenty of timber "farther west"; that it will last "indefinitely" at the "present rate."

But the lumberman bases all his timber estimates on the present rate of cutting and on the present rate of demand. True, no one can prophesy or estimate the accelerated, the cumulative demand of the future. Decade after decade of our past has shown us that we could not dream big enough to cover the actual figures of this demand. Yet this unestimated factor is the element of danger for the future.

The lumberman does not figure on the million or more of immigrants we take in each year to house, not to mention an occasional American native born. Worst and most absurd of all, he figures on the timber

supply lasting on the basis of its all being used. Yet of all the timber now left standing in America, to represent our entire future supply, this lumberman, judged by his record, will use less than one half. The other half will never be taken out of the woods at all. Three fourths of that half may never even be cut, but may be set on fire and burned as it stands. Much as we had in forest resources in the past, we never could afford to have lumbering operations destroy as much as they sawed. But that is what they did. What should be our attitude to-day toward the threatening destruction of one half of our alarmingly small remaining supply?

Last year we cut nearly forty billion (40,000,000,000) feet of lumber, board measure. It may be interesting to know in what proportions the different states furnished this supply. In relative order a partial list is as follows: Washington, Louisiana, Wisconsin, Michigan, Mississippi, Arkansas, Minnesota, Texas, Pennsylvania, Oregon, California, North Carolina, and so down. To-day Washington furnishes 11.5 per cent of our lumber, and Louisiana 7.4 per cent. Let us look now at some of the demands for trees that at first might seem unimportant.

Our railroads are said to use one third of the industrial timber cut. They require, on the basis of present demand, 100,000,000 ties per year, and they are always wondering where they are going to get them. The demand is for better ties, not poorer. Bad ties mean wholesale murder, forfeiture of mail contracts, reduced dividends. A tie contains about thirty-five feet of wood. All sorts of wood are now being used for ties, from hemlock at twenty-eight cents to white oak at fifty-one cents, an average of forty-seven cents per tie. Suppose we could cut one hundred ties to the acre; we should require a million acres a year for ties. Hardwood grows, under favorable conditions, a little more than forty cubic feet per acre per year. Not a very fast crop, is it? Railroad men sincerely wish it might be faster. The Santa Fe road has recently arranged to plant a few thousand acres with eucalyptus, from which it will some time make ties. Each road now has its tie lands. These lands no longer furnish a public supply of lumber.

Alongside the ties run the telegraph poles, not so perishable, but requiring continual renewal. Two years ago we cut 3,526,875 poles over twenty feet in length. Three fifths of these were cedar, 28 per cent chestnut. We cut hundreds of thousands of smaller poles, also, not to mention vast quantities of what is called lodge-pole pine, for other uses. We annually reap for telegraph and telephone poles somewhere between three and four million acres of land.

Our tanneries two years ago required 1,370,000 cords of bark. In the same year we cut 11,858,260 shingles and 3,812,807 laths. This represents one of the real savings in lumber manufacture—the utilization of material much of which otherwise would go to waste. Then we

had to timber our mines, and for that we used 165,000,000 cubic feet, not board measure, much of which was the best of hardwood.

If you stood on the top of a tower in the greatest hardwood forests of the South, one sweep of the scythe of civilization would mow it farther than you could see, for one month's use in vehicles, manufactured furniture, and farm implements. Prices for this kind of wood have risen from 25 to 65 per cent since 1899. In seven years the production of hardwood has fallen off 15 per cent; and those were the six years of its greatest demand.

There is absolutely no hope for vehicle and machine makers except a more careful use of the hardwood forests of the South and the Southeast; nor indeed can that be called a solution now. In these forests grow also many softer woods, once scorned. Continually we adjust, compromise, become European and not American. Tight-barrel cooperage is a heavy drain on white oak. In 1906 we made 267 million tight-barrel staves. We sent to Europe last year about five million dollars' worth of white oak staves. Meantime, California can not get casks for her wine, because white oak now costs too much to ship to California. She is trying redwood for wine casks now, and grumbling mightily. Slack-barrel cooperage in elm, gum, beech, basswood, and fourteen other woods not long ago thought worthless, cut 1,097,063,000 staves in one year. All these little demands foot up an enormous and menacing total in acreage.

Waste of timber in the Yellowstone Park. Our descendants will bitterly rue this loss.

The highest estimate of our remaining hardwood is four hundred billion feet. For lumber, ties, posts, manufactures, fuel, etc., we use twenty-five billion feet per annum or more. At that rate it will take us sixteen years to use up all the rest of our hardwood—if we do not burn it, and if the demand remains the same! A pleasant prospect, is it not?

Some one has figured that a big Sunday newspaper needs twenty acres of pulp wood to make the paper for one edition. The Chicago

Tribune, a chance instance, uses 200,000 pounds of paper each Sunday, or 400,000 each week. Do your own multiplying. We used of domestic spruce alone for pulp wood in one year 1,785,680 cords. The average stand of spruce pulp wood in the regions where it is cut is probably about ten cords per acre; so that of such spruce land we require at least 178,500 acres annually. A ton of paper takes about two cords of spruce in the making—to be exact, about 1,750 pounds of paper pulp.

We use other woods for pulp now, hemlock, balsam, pine, poplar;

Slaughter of the forest. An old burn. Picture the frightful waste of good wood when a great forest region is reduced to this by repeated burnings. It has never been cut.

3,661,176 cords was our total for 1906. We used in that year 2,327,844 tons of pulp. Since each ton probably cost on the average two cords of some sort of wood, not allowing anything for waste, there were over four million cords cut somewhere, mostly in the United States; which means something like a million acres a year for pulp. Call it a half million for close measure. Do some figuring. If it costs twenty acres a Sunday, or forty acres a week, or 2,080 acres a year to print one daily newspaper, what does it cost in acreage to print all the newspapers in all the cities and towns of America? Add to this the enormous editions of our magazines. Add to this the paper used in books. The total staggers the imagination, and yet the amount of timber cut for pulp

in the United States annually is less than 5 per cent of what is cut for lumber.

It would seem that we can not afford much longer to read. Neither shall we long be able to write. Last year we made more than 315,000,000 lead pencils. A lead pencil is not very large, but the total number of lead pencils required 7,300,000 cubic feet of cedar. We have cedar enough to last us just twelve years.

More than 100,000 acres of timber in the whole United States are cut

Slaughter of the forest. The trees are chopped down, peeled, and then the whole surface of the forest is burnt to the bone, so that the logs may be easily and cheaply dragged out.

over every working day. We use many times more timber per capita than any other nation.

We have left not over 450,000,000 acres bearing commercial timber. Cast up in your mind some of the small demands of industry noted above. Multiply this by three or four to represent the total, including all sorts of sawn lumber. Remember that you are dealing in terms of millions of acres. Divide 450,000,000 by your total number of millions of known demand. What is the result? Do you find it pleasant? Do you remain willing to listen to the charming of those who are either ignorant or hypocritical in their "estimates?"

THE CONVENTION OF GOVERNORS.

THE first conference of the Governors of the United States and Territories was held at the White House, in Washington, D. C., during the three days beginning May 13, 1908.

The East Room was prepared for the occasion, its severe simplicity somewhat brightened by draperies of green velvet on the walls, about the platform on which were seated the presiding officer, the speakers, the Supreme Court, and the President's Cabinet. Two great maps, the largest ever made by mechanical means, hung on the east wall. One showed the timber resources of the United States, while the other showed the mineral deposits. Between these maps was an arrangement for illustrating the different phases of conservation by means of superb transparencies. On the floor special chairs were arranged in semi-circles for the Governors; while to the rear and at the sides were seats for the Governor's advisers and the guests.

Practically all the states and territories were represented; it was a historic occasion; nearly every speaker laid stress on the declaration that the meeting was an epoch-making one, that from it would spring an organization of the Governors that through its deliberations and the weight of its opinions would exercise through the years to come a tremendous influence over the destinies and the affairs of the nation.

Some extracts from the most notable of the many addresses delivered at this famous conference will be appropriate here as a fitting close to our handbook on Conservation.

SIGNIFICANCE OF THE MEETING.

The savage knows and confesses his dependence upon the forces of nature. His whole life is circumscribed by the resources of forest, field, and stream. Indeed, he feels himself a part of nature, and scarcely separates his fate from that of his surroundings. The game of the prairie, the forest, and the river, the berries and herbs in their season, and the living waters supply him with food and drink. With the changing seasons he moves from place to place, pursuing plenty. He winters in rude huts filled with smoke from fires of fallen wood, hardly less at the mercy of the cold than are the hibernating animals. In the spring he wakes with nature, and his summers are prosperous and happy only as the wild crops of field and forest are plentiful. He rises and lies down with the sun. He survives only as he observes nature and fits himself to her ways.

But as savagery gives place to civilization, man frees himself more and more from those bonds which bound him so closely to nature. Slowly and painfully at first, and then far more rapidly and easily, he learns to control his material surroundings. He breaks the prairie with the plow, makes the beasts of the field his servants, strikes the pick into the mountain and the axe into the veteran of the forest. He now no longer waits upon the seasons. He builds himself a house against the cold and warms himself to the point of comfort in the midst of the winter blast. Instead of passively accepting the wild fruits as they ripen he compels the soil to yield a harvest a millionfold more abundant, and this harvest he stores up against days of want. Instead of migrating with the birds he fixes his home where he will, and pursues his work and his pleasure in his own time.

Discovery and invention place new implements in his hands. With his intelligence quickened and his body trained by new experience and new occupations, he continues to increase his mastery over time, temperature, and place. New material riches become available. He is able to satisfy his wants more readily and more certainly than ever before. The standard of his living is raised. He now possesses and enjoys besides all that his fathers required, a host of things of which they knew nothing. Wants multiply with prosperity, till his life becomes highly complex. He is lord of nature, because he has learned how to appropriate her resources.

But if the resources of nature should fail, where would be his mastery then?

This is the point which we commonly overlook. Man has laid nature under tribute, and has become powerful because nature was rich. Impoverish nature and her tribute stops. Ingenuity, capacity, labor,

are incapable of extracting wealth from the gutted mine, from the fire-scorched brush land, from the sun-baked stream bed, from the impoverished soil. Civilization is achieved by the use of the resources of nature; it can endure no longer than the resources upon which it depends.

Living as we do to-day in the midst of conveniences which give us apparent independence of nature, it is almost inevitable that we should lose sight of this truth. It is difficult for us to realize that we, standing at the height of western civilization, are in fact vastly more dependent upon tributary nature than is the savage of the South Seas. Suppose the coal supply should give out in the middle of winter? Suppose a huge conflagration should sweep our forests from the hillsides? Suppose sudden floods should lay waste our fertile farm lands, scoring them with gullies or heaping them with sand? Would not any single one of these calamities bring upon us incalculable losses and suffering?

And yet these suppositions are not imaginary. We need to look only a very little way ahead, as things are going now, in order to see them realized, in effect. True, the failure of our resources will not come suddenly, and such of our resources as can be renewed need never fail if we use them wisely. But the exhaustible resources, chief among which are the mines, are coming to an end as certainly as if the end were to-day, while those resources whose exhaustion is due not to necessity, but to folly, have no future unless we insure it by our own provision.

It is clear, therefore, that the question how we shall make the best use of our natural resources, renewable and not renewable, is a pressing question of the hour. Where renewal is impossible, there is need of the strictest economy; and where renewal can be secured by prudence and foresight, the very existence of the nation demands that prudence and foresight be exercised.

This is the significance of the Conference of Governors on the Conservation of Natural Resources held at the White House, May 13-15, 1908, which took up for the first time the problem of conservation in all its details.

TREADWELL CLEVELAND, JR.

A NEW PATRIOTIC IMPULSE.

The World's Work Magazine summed up the Governor's Conference in its editorial correspondence as follows.

It was the most notable company of men that has come together in our country in recent times. The official head of the nation, the Cabinet, the Supreme Court, certain members of Congress, the heads of the states, and, besides these, many of the most distinguished scientific men that we have and men of a sound grasp of public subjects who

came as "advisers" to the Governors—two or three of the most noteworthy citizens of every state—among them the presidents of many of our foremost universities and schools of science; and, besides these, representatives of all the most important national organizations of scientific and commercial bodies.

About the general proposition that this extraordinary meeting was called to emphasize there was no difference of opinion. And the wealth of facts that were presented put the subject in every mind in a new way, and aroused every man to an argent purpose. When one subject was put into every mind as the foremost subject of public action that this generation can have, and was so presented and emphasized as to win universal assent and to arouse a patriotic purpose, then all the machinery of publicity, of exhortation, and of public action that a democracy can have was put in action at one stroke.

The scientific papers presented to the Conference, giving exact data about agriculture, streams, forests, coal, and all similar subjects, were the most practical and helpful literature of waste and of methods of conservation ever put together. They will become a classic description of our great resources as they now are.

The brief speeches by many of the Governors were in the nature of an "experience meeting." They told of the work that the state governments are doing to save and to reclaim. And the resolutions adopted called on the government, local and national, and on the people to preserve our national wealth.

Every man came away from the most noteworthy gathering that he ever attended, with a new love of his country, a new attitude toward it, a new conscience about the land, the trees, and the streams; and we entered then on a new era in our national thought and in our attitude toward our land.

ANDREW CARNEGIE.

The ironmaster of Pittsburg, who has scattered libraries over this continent like the sands of the sea, delivered a striking address from which only a few extracts can be given.

In view of the sobering facts presented, the thoughtful man is forced to realize, first, that our production and consumption of minerals are increasing much more rapidly than our population; and, second, that our methods are so faulty and extravagant that the average waste is very great, and in coal almost as great as the amount consumed. The serious loss of life in the mines is a feature that can no longer be overlooked. Nor can we fail to realize that the most useful minera will shortly become scarce, and may soon reach prohibitive cost unless steps to lessen waste are taken in the interest of the future.

ave for many years been impressed with the steady depletion of ron ore supply. It is staggering to learn that our once supposed e supply of rich ores can hardly outlast the generation now appear- eaving only the leaner ores for the later years of the century. It judgment, as a practical man accustomed to dealing with those ial factors on which our national prosperity is based, that it is to take thought for the morrow.

are nationally in the position of a large family receiving a rich nony from thrifty parents deceased intestate; the President may ened to the eldest son, and the Governors to younger brothers, y responsible for the minors; the experts assembled may be likened family solicitors. Now, the first duty of such a family is to take of its patrimony; the next to manage the assets in such manner one shall be wasted, that all be put to the greatest good of the and their descendants. Now, we have just begun to take stock national patrimony; and it is with the deepest sense of responsi- imposed upon me by the invitation to this meeting, to the nation, coming generations of all time, that I speak as one of the junior ors. In my opinion, we should watch closely all the assets and both to save and to use them more wisely.

us begin with iron: We must in all possible ways lessen the ids upon it, for it is with iron ore we are least adequately pro-

One of the chief uses of this metal is connected with transporta- mainly by rail. Moving 1,000 tons of heavy freight by rail es an 80-ton locomotive and twenty-five 20-ton steel cars (each ton capacity), or 580 tons of iron and steel, with an average of, en miles of double track (with 90-pound rails), or 317 tons onal; so that, including switches, frogs, fish-plates, spikes, and incidentals, the carrier requires the use of an equal weight of

The same freight may be moved by water by means of 100 to ons of metal, so that the substitution of water-carriage for rail- ge would reduce the consumption of iron by three fourths to eighths in this department. At the same time the consumption l for motive power would be reduced 50 to 75 per cent, with a ponding reduction in the coal required for smelting. No single pen to us to-day would do more to check the drain on iron and han the substitution of water-carriage for rail-carriage wherever cable, and the careful adjustment of the one to the other through- ie country.

NATURAL GAS.

Dr. White, the State Geologist of West Virginia, presented in vivid fashion a picture of the waste of our purest form of fuel. This is of interest to us in California, because we, too, have great fields of petroleum and natural gas being used in similar ways.

A great geologist once said, "The nations that have coal and iron will rule the world." Bountiful nature has dowered the American people with a heritage of both coal and iron richer by far than that of any other political division of the earth.

It was formerly supposed that China would prove the great storehouse from which the other nations could draw their supplies of carbon when their own had become exhausted, but the recent studies of a brilliant American geologist in that far-off land, rendered possible by the generosity of the world's greatest philanthropist, tell a different story. The fuel resources of China, great as they undoubtedly are, have been largely overestimated, and Mr. Willis reports that they will practically all be required by China herself, and that the other nations can not look to her for this all-important element in modern industrial life.

A simple glance at a geological map of the United States, will convince any one that nature has been most lavish to us in fuel resources, for we find a series of great coal deposits extending in well scattered fields almost from the Atlantic to the Pacific, from the Lakes to the Gulf, while even over much of New England and the coastal plains, vast areas of peat, the primal stage of coal, have been distributed. But coal of every variety from peat to anthracite is not all of nature's fuel gifts to fortunate America. Great deposits of both petroleum and natural gas occur in nearly every state where coal exists, and in some that have no coal. What greater dowry of fuels could we ask when we find them stored for us within the bosom of our mother earth in all three of the great types—coal, petroleum, and natural gas—only awaiting the tap of the pick and drill to bring them forth in prodigal abundance?

What account can we as a nation give of our stewardship of such vast fuel treasures? Have we carefully conserved them, using only what was necessary in our domestic and industrial life, and transmitting the remainder, like prudent husbandmen, unimpaired to succeeding generations? Or have we greatly depleted this priceless heritage of power and comfort, and source of world-wide influence, by criminal waste and wanton destruction? The answer should bring a blush of shame to every patriotic American, for not content with destroying our magnificent forests, the only fuel and supply of carbon known to our forefathers, we are with ruthless hands and regardless of the future *applying* both torch and dynamite to the vastly greater resources of

:his precious carbon which provident nature has stored for our use in :he buried forests of the distant past. The wildest anarchists deter-nined to destroy and overturn the foundations of government could not ıct in a more irrational and thoughtless manner than have our people n permitting such fearful destruction of the very sources of our power ınd greatness. Let me enumerate some of the details of this awful vaste of our fuel resources that has been going on with ever increasing ıpeed for the last forty years.

First, let us consider how we have wasted natural gas, the purest :orm of fuel, ideal in every respect, self-transporting, only awaiting :he turning of a key to deliver to our homes and factories heat and light ınd power. Partial nature has apparently denied this great boon to nany other lands. It is practically unknown in France, Germany, and Great Britain, our chief competitors in the world of industry. Even wood and coal must first be converted into gas before they will burn, but here is a fuel of which nature has given us a practical monopoly, lavish in abundance, already transmuted into the gaseous stage and stored under vast pressure to be released wherever wanted at our bidding. The record of waste of this our best and purest fuel is a national disgrace.

At this very minute this unrivaled fuel is passing into the air within our domain from uncontrolled gas wells, from oil wells, from giant flambeaus, from leaking pipe lines and the many other methods of waste at the rate of not less than one billion cubic feet daily and probably much more.

Very few appear to realize either the great importance of this hydro-arbon fuel resource of our country, or its vast original quantity. Some f the individual wells, if we may credit the measurements, have pro-ıced this fuel at the rate of 70,000,000 cubic feet daily, the equivalent heating value of 70,000 bushels of coal, or nearly 12,000 barrels of l. In my humble opinion the original amount of this volatile fuel the United States, permeating, as it does, every undisturbed geologic rmation from the oldest to the most recent, rivaled or even exceeded heating value, all of our wondrous stores of coal.

Suppose that it were possible for some Nero, inspired by a mania of ıcendiarism, to apply a consuming torch to every bed of coal that crops the surface from the Atlantic to the Pacific, and that the entire coal pply of the Union was threatened with destruction within a very w years, what do you think would happen? Would our State legisla-res sit undisturbed panoplied by such a carnival of fire? Would the vernors of thirty states remain silent while the demon of flame was vaging the coal resources of the republic? Certainly not; there would a united effort by the Governors and legislatures of all the states in e Union *to stay the progress* of such a direful conflagration; even the

sacred constitutional barriers wisely erected between state and federal authority would melt away in the presence of such an awful calamity, and the mighty arm of the nation would be invoked to help end the common peril to every interest. And yet this imaginary case is an *actual one* with the best and purest fuel of the country, equal probably in quantity and value for heat, light, and power to all of our coal resources. This blazing zone of destruction extends in a broad band from the Lakes to the Gulf, and westward to the Pacific, embracing in its flaming pathway the most precious fuel possessions of a continent. No one can even approximate the extent of this waste. From personal knowledge of conditions which exits in every oil and gas field, I am sure the quantity will amount to not less than one billion cubic feet daily, and it may be much more. The heating value of a billion cubic feet of natural gas is roughly equivalent to that of one million bushels of coal. What an appalling record to transmit to posterity!

From one well in eastern Kentucky there poured a stream of gas for a period of twenty years without any attempt to shut it in or utilize it, the output of which, it has been figured, was worth at current prices more than three million dollars. Practically the same conditions characterized the first twenty-five years of Pennsylvania's oil and gas history, and the quantity of wasted gas from thousands of oil and gas wells in western Pennsylvania is beyond computation. In my own state of West Virginia, only eight years ago, not less than 500,000,000 cubic feet of this precious gas was daily escaping into the air from two counties alone, practically all of which was easily preventable, by a moderate expenditure for additional casing. When it is remembered that one thousand cubic feet of natural gas weighs 48 pounds, and that 6,000 cubic feet of it would yield a 42-gallon barrel of oil when condensed, so that a well flowing 6,000,000 feet of gas is pouring into the air daily the equivalent of 1,000 barrels of oil, what would our petroleum kings think, if they could see this river of oil (for the equivalent of a billion feet of gas is more than 160,000 barrels of petroleum, and of practically the same chemical composition as benzine or gasolene) rushing unhindered to the sea? Would they not spend millions to check such a frightful waste of this golden fluid? And would they not be the first to appeal to the national government for aid in ending such great destruction of property? And yet because natural gas is invisible, and its waste is not so apparent to the eye as a stream of oil, or a burning coal mine, the agents of these oil magnates have not only permitted this destruction of the nation's fuel resources to continue, but they have prevented by every means in their power the enactment of any legislation to stop this frightful loss of the best and purest fuel that nature has given to man.

There can be no doubt that for every barrel of oil taken from the earth there have been wasted more than ten times its equivalent in either heating power, or weight even, of this the best of all the fuels, and also that much more than half of this frightful waste could have been avoided by proper care in oil production and slight additional expenditures.

In justice to the great oil-producing corporations, it must be acknowledged that they have not permitted much waste of petroleum except what has been sprayed into the air by their awful waste of gas, and also that their handling of petroleum has been from the beginning a model of business economy and management. The great mistake of the oil producing interests has been in not properly apprehending the enormous fuel value of the natural gas they were destroying, and in not demanding legislation for its protection instead of successfully throttling and preventing it in every state of the Union except one—Indiana. When the people of that great state awoke to the fact that their richest mineral possession was being rapidly wasted, they rose to the occasion, and although it was largely a case of "locking the stable door after the horse had been stolen," they effectually prevented any further useless waste of natural gas. This Indiana statute which has been declared constitutional by our highest courts, says in effect to the oil producers: "You can not take the oil from the ground where nature has safely stored it, until you provide a method of utilizing the accompanying gas, or volatile oil as well," and it also says to both the producer and consumer of natural gas, that it is against "public policy to waste this valuable fuel, and that it will not be permitted to either party." This Indiana statute for the conservation of petroleum and natural gas should be enacted into law in every state where this precious fuel exists; and why has it not been done?

JAMES J. HILL.

The railroad magnate of the Great Northern is recognized not only as a captain of industry, but as a high authority on the lands and resources of the United States. His thoughts are well worth weighing.

"Of all the sinful wasters of man's inheritance on earth," said the late Professor Shaler, "and all are in this regard sinners, the very worst are the people of America." This is not a popular phrase, but a scientific judgment. It is borne out by facts. In the movement of modern times, which has made the world commercially a small place, and has produced a solidarity of the races such as never before existed, we have come to the point where we must to a certain extent regard the natural resources of this planet as a common asset, compare them with demands *now made and likely* to be made upon them, and study their

judicious use. Commerce, wherever untrammeled, is wiping out boundaries and substituting the world relation of demand and supply for smaller systems of local economy. The changes of a single generation have brought the nations of the earth closer together than were the states of this Union at the close of the Civil War. If we fail to consider what we possess of wealth available for the uses of mankind, and to what extent we are wasting a national patrimony that can never be restored, we might be likened to the directors of a company who never examine a balance sheet.

The sum of resources is simple and fixed. From the sea, the mine, the forest and the soil must be gathered everything that can sustain the life of man. Upon the wealth that these supply must be conditioned forever, as far as we can see, not only his progress, but his continued existence on earth. How stands the inventory of property for our own people? The resources of the sea furnish less than five per cent of the food supply, and that is all. The forests of this country, the product of centuries of growth, are fast disappearing. The best estimates reckon our standing merchantable timber at less than 2,000,000,000,000 feet. Our annual cut is about 40,000,000,000,000 feet. The lumber cut rose from 18,000,000,000 feet in 1880 to 34,000,000,000 feet in 1905; that is, it nearly doubled in twenty-five years. We are now using annually 500 feet board measure of timber per capita, as against an average of 60 for all Europe. The New England supply is gone. The Northwest furnishes small growths that would have been rejected by the lumbermen of thirty years ago. The South has reached its maximum production and begins to decline. On the Pacific coast only is there now any considerable body of merchantable standing timber. We are consuming yearly three or four times as much timber as forest growth restores. Our supply of some varieties will be practically exhausted in ten or twelve years; in the case of others, without reforesting, the present century will see the end. When will we take up in a practical and intelligent way of reforestation of our forest? * * *

The exhaustion of our coal supply is not in the indefinite future. The startling feature of our coal production is not so much the magnitude of the annual output as its rate of growth. For the decade ending in 1905 the total product was 2,832,402,746 tons, which is almost exactly one half the total product previously mined in this country. For the year 1906 the output was 414,000,000 tons, an increase of 46 per cent on the average annual yield of the ten years preceding. In 1907 our production reached 470,000,000 tons. Fifty years ago the annual per capita production was a little more than one quarter of a ton. It is now about five tons. It is but eight years since we took the place of Great Britain as the leading coal-producing nation of the world, and *already our product* exceeds hers by over 43 per cent, and is 37 per cent

of the known production of the world. Estimates of coal deposits still remaining must necessarily be somewhat vague, but they are approximately near the mark. The best authorities do not rate them at much over 2,000,000,000,000 tons. If coal production continues to increase as it has in the last ninety years, the available supply will be greatly reduced by the close of the century. Before that time arrives, however, resort to lower grades and sinking of mines to greater depths will become necessary, making the product inferior in quality and higher in price. Already Great Britain's industries have felt the check from a similar cause, as shown in her higher cost of production. Our turn will begin probably within a generation or two from this time. Yet we still think nothing of consuming this priceless resource with the greatest possible speed. Our methods of mining are often wasteful; and we not only prohibit our industries from having recourse to the coal supplies of other countries, but actually pride ourselves upon becoming exporters of a prime necessity of life and an essential of civilization.

The iron industry tells a similar story. The total of iron ore mined in the United States doubles about once in seven years. It was less than 12,000,000 tons in 1893, over 24,000,000 tons in 1899, 47,740,000 tons in 1906, and over 52,000,000 tons in 1907. The rising place of iron in the world's life is the most impressive phenomenon of the last century. In 1850 the pig iron production of the United States amounted to 563,757 tons, or about 50 pounds per capita. Our production now is over 600 pounds per capita. We do not work a mine, build a house, weave a fabric, prepare a meal or cultivate an acre of ground under modern methods without the aid of iron. We turn out over 25,000,000 tons of pig iron every year, and the production for the first half of 1907 was at the rate of 27,000,000 tons. This is two and one half times the product of Great Britain. It is nearly half the product of the whole world. And the supply of this most precious of all the metals is so far from inexhaustible that it seems as if iron and coal might be united in their disappearance from common life.

We now turn to the only remaining resource of man upon this earth, which is the soil itself. How are we caring for that, and what possibilities does it hold out to the people of future support? We are only beginning to feel the pressure upon the land. The whole interior of this continent, aggregating more than 500,000,000 acres, has been occupied by settlers within the last fifty years. What is there left for the next fifty years? Excluding arid and irrigable areas, the latter limited by nature, and barely enough of which could be made habitable in each year to furnish a farm for each immigrant family, the case stands as follows: In 1906 the total unappropriated public lands in the United States consisted of 792,000,000 acres. Of this area the divisions of Alaska, *Arizona*, *California*, Colorado, Idaho, Montana, Nevada, New

Mexico, and Wyoming contained 195,700,000 acres of unsurveyed land. Little of Alaska is fitted for general agriculture, while practically all of the rest is semi-arid, available only for grazing or irrigation. We have (subtracting these totals) 50,000,000 acres of surveyed and 36,500,000 acres of unsurveyed land as our actual remaining stock. And 21,000,000 acres were disposed of in 1907. How long will the remainder last? No longer can we say that "Uncle Sam has enough to give us all a farm."

Equally threatening is the change in quality. There are two ways in which the productive power of the earth is lessened; first by erosion and the sweeping away of the fertile surface into streams and thence to the sea, and, second, by exhaustion through wrong methods of cultivation. The former process has gone far. Thousands of acres in the East and South have been made unfit for tillage. North Carolina was, a century ago, one of the great agricultural states of the country, and one of the wealthiest. To-day as you ride through the South you see everywhere land gullied by torrential rains, red and yellow clay banks exposed where once were fertile fields; and agriculture reduced because its main support has been washed away. Millions of acres, in places to the extent of one tenth of the entire arable area, have been so injured that no industry and no care can restore them.

Far more ruinous, because universal and continuing in its effects, is the process of soil exhaustion. It is creeping over the land from East to West. The abandoned farms that are now the playthings of the city rich or the game preserves of patrons of sport, bear witness to the melancholy change. New Hampshire, Vermont, northern New York show long lists of them. In western Massachusetts, which once supported a flourishing agriculture, farm properties are now for sale for half the cost of the improvements. Professor Carver, of Harvard, has declared, after a personal examination of the country, that "agriculture as an independent industry, able in itself to support a community, does not exist in the hilly parts of New England."

The same process of deterioration is affecting the farm lands of western New York, Ohio, and Indiana. Where prices of farms should rise by increase of population, in many places they are falling. Between 1880 and 1900 the land values of Ohio shrank $60,000,000. Official investigation of two counties in central New York disclosed a condition of agricultural decay. In one land was for sale for about the cost of improvements, and 150 vacant houses were counted in a limited area. In the other the population in 1905 was nearly 4,000 less than in 1855.

Practically identical soil conditions exist in Maryland and Virginia, where lands sell at from $10 to $30 an acre. In a hearing before an industrial commission, the chief of the Bureau of Soils of the Department of Agriculture said: "One of the most important causes of

erioration, and I think I should put this first of all, is the method
. system of agriculture that prevails throughout these states.
questionably the soil has been abused." The richest region of the
st is no more exempt than New England or the South. The soil of
West is being reduced in agricultural potency by exactly the same
cesses which have driven the farmer of the East, with all his advan-
e of nearness to markets, from the field.

Within the last forty years a great part of the richest land in the
ntry has been brought under cultivation. We should, therefore, in
: same time, have raised proportionately the yield of our principal
ps per acre; because the yield of old lands, if properly treated, tends
increase rather than diminish. The year 1906 was one of large crops,
d can scarcely be taken as a standard. We produced, for example,
re corn that year than had ever been grown in the United States in
single year before. But the average yield per acre was less than it
s in 1872. We are barely keeping the acre product stationary. The
erage wheat crop of the country now ranges from twelve and one half,
ordinary years, to fifteen bushels per acre in the best seasons. And
it is on down the line.

Not only the economic but the political future is involved. No people
er felt the want of work or the pinch of poverty for a long time with-
t reaching out violent hands against their political institutions,
lieving that they might find in a change some relief from their dis-
ss. Although there have been moments of such restlessness in our
ntry, the trial has never been so severe or so prolonged as to put us
the test. It is interesting that one of the ablest men in England
ring the last century, a historian of high merit, a statesman who saw
tive service and a profound student of men and things, put on record
s prophecy of such a future ordeal. Writing to an American corre-
ondent fifty years ago, Lord Macaulay used these words: "As long as
u have a boundless extent of fertile and unoccupied land, your labor-
g population will be found more at ease than the laboring population
the Old World; but the time will come when wages will be as low
d will fluctuate as much with you as they do with us. Then your
stitutions will be brought to the test. Distress everywhere makes the
borer mutinous and discontented, and inclines him to listen with
gerness to agitators who tell him that it is a monstrous iniquity that
e man should have a million and another can not get a full meal.
* * The day will come when the multitudes of people, none of
hom has had more than half a breakfast or expects to have more than
lf a dinner, will choose a legislature. Is it possible to doubt what
rt of legislature will be chosen? * * * There will be, I fear,
oliation. The spoliation will increase the distress; the distress will
roduce a *fresh spoliation*. * * * Either civilization or liberty will

perish. Either some Cæsar or Napoleon will seize the reins of government with a strong hand, or your republic will be as fearfully plundered and laid waste by barbarians in the twentieth century as the Roman Empire in the fifth." We need not accept this gloomy picture too literally, but we have been already sufficiently warned to prevent us from dismissing the subject as unworthy of attention. Every nation finds its hour of peril when there is no longer free access to the land or when the land will no longer support the people. * * * Far may this day be from us. But since the unnecessary destruction of our land will bring new conditions of danger, its conservation, its improvement to the highest point of productivity promised by scientific intelligence and practical experiment, appears to be a first command of any political economy worthy of the name.

If this patriotic gospel is to make headway, it must be by just such organized missionary work as is to-day begun. It can not go on and conquer if imposed from without. It must come to represent the fixed idea of the people's mind, their determination and their hope. It can not be incorporated in our practical life by the dictum of any individual or any officer of nation or state in his official capacity. It needs the coöperation of all the influences, the help of every voice, the commendation of nation and state that has been the strength and inspiration of every worthy work on American soil for 120 years. We return, for our gathering in council and for our plan of action for the future, to the model given us by the fathers. State and nation are represented here, without jealousy or any ambition of superiority on either side, to apply to the consideration of our future such coöperation as that out of which this nation was born, and by which it has won to worthy manhood. Reviving the spirit of the days that created our Constitution, the days that carried us through civil conflict, the spirit by which all our enduring work in the world has been wrought, taking thought as Washington and Lincoln took thought, only for the highest good of all the people, we may, as a result of the deliberations held and the conclusions reached here to-day, give new meaning to our future; new lustre to the ideal of a republic of living federated states; shape anew the fortunes of this country, and enlarge the borders of hope for all mankind.

THE SECRETARY OF AGRICULTURE.

Perhaps no one has had a better opportunity to know about the soil of this nation than James Wilson, the Secretary of Agriculture. He made the following remarks.

"The paper read by Mr. Hill this morning made a very deep impression upon me. The greatest asset we have in the United States is our soil; we are destroying that as rapidly as we can, and the oldest settled part of the United States has made the most progress in the destruction of our soil, of which we have a great variety. Down on the Gulf coast the land has been peopled longer than the upper part of the Mississippi Valley. The heavy rainfalls, and the perpetual cultivation and growing of crops have helped erosion, and the soil has been destroyed in that way. It is going off very, very rapidly. The cure is a system of agriculture that will keep the soil filled with plant food, organic matter, humus. That is the cure; that is the way to keep up the soil. Somebody once asked an English gardener how he got such a fine lawn. He had a beautiful grass lawn which attracted attention. He said, 'We weeded, and we weeded; we manured and we manured, for eight hundred years;' and that is the way they got it."

IN WISCONSIN.

The Governor of Wisconsin graphically described the recent history of his own state.

"Great lumber companies," said Governor Davidson, "inspired only by an enthusiasm and a greed which knew no bounds, attacked these forests, engaging in a mad race each to strip its territory, to market its lumber first, and then to move forward and continue the destruction. No tree was regarded as too small to escape cutting. Trunks six inches in diameter were cut for lumber. Millions of young trees and saplings, which were too small to have any commercial value, were crushed by falling timber, or were cut to make room for logging roads. Those that escaped the axe of the loggers fell victims to forest fires, the destruction by which can only be counted by the millions of dollars—a further melancholy evidence of the carelessness with which our forest tracts were guarded.

"To-day we are beginning to feel the penalty for this indifference. Our proud position as the greatest timber state of the Union has passed to others. Thousands of acres of land of no value for agriculture have been rendered bare and practically worthless; our swamps are drying up, and as a consequence many of our streams have shrunk to but a small proportion of their former size. The destruction of our forests

has taken from us that great regulator of the streams, for with no forests to protect the head water of rivers and to detain the water upon the soil, we have frequent freshets and floods, and are confronted with the problem of dealing with rapidly rising and falling stream volume—a condition which has already rendered many of our one-time valuable water powers practically worthless."

A DISSENTING VIEW.

President James of the University of Illinois dissented from the ideas of the other speakers.

It was his optimistic opinion, that no such waste as had been alluded to by previous speakers had existed in this country; or, if it did exist, it was not really waste, but the simple methods that, instinctively adopted by the early settlers of the country, had proven themselves in the main correct. He said that the fact that farms of the East have passed out of cultivation is not necessarily an indication that those farms have lost their productive power, but, rather, that they have been abandoned because of the opening up of broader fields of usefulness in the regions beyond the Mississippi and the Missouri, and he said he believed that, after all is said and done, the greatest natural resources the country possesses is not its forests, its rivers, its mines, or its soil, but in the brains of its people.

DECLARATION OF PRINCIPLES.

ore adjourning, the Governors signed the following Declaration as lying the results of the Convention:

DECLARATION.

the Governors of the States and Territories of the United States of :a, in conference assembled, do hereby declare the conviction that the prosperity of our country rests upon the abundant resources of the land by our forefathers for their homes, and where they laid the foundation of eat nation.

look upon these resources as a heritage to be made use of in establishing omoting the comfort, prosperity, and happiness of the American people, t to be wasted, deteriorated, or needlessly destroyed.

agree that our country's future is involved in this; that the great natural ces supply the material basis upon which our civilization must continue and, and upon which the perpetuity of the nation itself rests.

agree, in the light of the facts brought to our knowledge and from infor- received from sources which we can not doubt, that this material basis atened with exhaustion. Even as each succeeding generation from the of the nation has performed its part in promoting the progress and pment of the Republic, so do we in this generation recognize it as a high o perform our part; and this duty in large degree lies in the adoption sures for the conservation of the natural wealth of the country.

declare our firm conviction that this conservation of our natural resources ubject of transcendent importance, which should engage unremittingly tention of the nation, the States, and the people in earnest co-operation.

natural resources include the land on which we live and which yields od; the living waters which fertilize the soil, supply power, and form venues of commerce; the forests which yield the materials for our homes, t erosion of the soil, and conserve the navigation and other uses of the s; and the minerals which form the basis of our industrial life, and supply h heat, light, and power.

agree that the land should be so used that erosion and soil wash shall and that there should be reclamation of arid and semi-arid regions by of irrigation, and of swamp and overflowed regions by means of drainage; ie waters should be so conserved and used as to promote navigation, to the arid regions to be reclaimed by irrigation, and to develop power in erests of the people; that the forests which regulate our rivers, support dustries, and promote the fertility and productiveness of the soil should served and perpetuated; that the minerals found so abundantly beneath face should be so used as to prolong their utility; that the beauty, health- , and habitability of our country should be preserved and increased; ources of national wealth exist for the benefit of the people, and that oly thereof should not be tolerated.

commend the wise forethought of the President in sounding the note of g as to the waste and exhaustion of the natural resources of the country, gnify our high appreciation of his action in calling this conference to con- he same and to seek remedies therefor through co-operation of the Nation ates.

agree that this co-operation should find expression in suitable action by ngress within the limits of and coextensive with the national jurisdiction subject, and, complimentary thereto, by the Legislatures of the several within the limits of and coextensive with their jurisdiction.

We declare the conviction that in the use of the national resources our independent States are interdependent and bound together by ties of mutual benefits, responsibilities, and duties.

We agree in the wisdom of future conferences between the President, Members of Congress, and the Governors of States on the conservation of our natural resources with a view of continued co-operation and action on the lines suggested; and to this end we advise that from time to time, as in his judgment may seem wise, the President call the Governors of States and Members of Congress and others into conference.

We agree that further action is advisable to ascertain the present condition of our natural resources and to promote the conservation of the same; and to that end we recommend the appointment by each State of a commission on the conservation of natural resources, to co-operate with each other and with any similar commission of the Federal Government.

We urge the continuation and extension of forest policies adapted to secure the husbanding and renewal of our diminishing timber supply, the prevention of soil erosion, the protection of head waters, and the maintenance of the purity and navigability of our streams. We recognize that the private ownership of forest lands entails responsiblities in the interests of the people, and we favor the enactment of laws looking to the protection and replacement of privately owned forests.

We recognize in our waters a most valuable asset of the people of the United States, and we recommend the enactment of laws looking to the conservation of water resources for irrigation, water supply, power, and navigation, to the end that navigable and source streams may be brought under complete control and fully utilized for every purpose. We especially urge on the Federal Congress the immediate adoption of a wise, active, and thorough waterway policy, providing for the prompt improvement of our streams and the conservation of their watersheds required for the uses of commerce and the protection of the interests of our people.

We recommend the enactment of laws looking to the prevention of waste in the mining and extraction of coal, oil, gas, and other minerals with a view to their wise conservation for the use of the people, and to the protection of human life in the mines.

Let us conserve the foundations of our prosperity.

STATE OF CALIFORNIA

OFFICE SUPERINTENDENT PUBLIC INSTRUCTION

CHOOL ARCHITECTURE

AND

SCHOOL IMPROVEMENT

FROM THE

TWENTY-THIRD BIENNIAL REPORT

EDWARD HYATT

SUPERINTENDENT OF PUBLIC INSTRUCTION

PREPARED AT THE REQUEST

OF THE

TAHOE CONVENTION OF SUPERINTENDENTS

SACRAMENTO, CALIFORNIA

1909

Printed at the State Printing Office, Sacramento, Cal.
W. W. SHANNON, Superintendent

INTRODUCTORY.

THE SCHOOL TRUSTEES OF CALIFORNIA:

Ladies and gentlemen, in your hands lie the purse strings of the blic schools in all this great State. Therefore, to you must be dressed any plea for the future improvement of our school property, a whole. You and your successors are the only ones who can translate d ideas into good schoolhouses and beautiful school grounds as time s on.

f I had you all together, so that I could talk to you face to face, I uld try to say very earnestly something like this:

My friends, it is almost as cheap to build a beautiful schoolhouse as ugly one—if we know how. California, like old Greece, is a land of utiful things. Sun and sea and mountain, streams and trees and vers conspire to make it a place delightful to mankind, inspiring to painter, the poet, the musician, attractive to all the world. This uty is a practical asset of vast importance to the State. Our Cali- nia landscapes must become famous for their tasteful and harmonious ools, everywhere, and not outraged by dreary stables for school- ses, slovenly barnyards for school grounds. Prosperous people find rofitable to have tidy and well kept houses, fences and grounds. Our ools, supported by the public, should certainly carry an air of pros- ity. We must not allow our little girls to absorb slatternly lessons the school. We must not allow broken windows and unkempt sur- ndings at the school to infect our little boys and make them grow up ftless, ne'er-do-weels."

am anxious for every school trustee in the State to get this message ne way or another. We have many examples of splendid schools up d down the State; but there is many a one yet of the other kind, that ds to be born again. The responsibility rests with the School Trus- s. Teachers, parents, and people can help the thing along by creating d public sentiment; and certainly they should study, talk, write,

work, to that end without ceasing. But finally it all comes up against the Trustees; without their interest, their active, intelligent, self-sacrificing work, it can come to naught.

Therefore, we have tried to get together some material that will be helpful and encouraging to you who wish to add to the glory of the Golden State by improving the public school. I hope it will interest you to see some of the latest ideas of our best school architects, some thoughts from enterprising superintendents, some idea of the best modern school buildings, some feeling for the adornment of school grounds. I beg you everyone to read all this, think about it, and try to find the best way for you to help in the work of making our public schools really worthy of California.

Very truly yours.

EDWARD HYATT.

This is to record a full measure of gratitude to the superintendents, architects and other persons who have helped to write this book. No one has received a penny for his service, and each has made it a labor of love. And it is to record no less of appreciation and gratitude to the officers and workmen of the State Printing Office, without whose careful and artistic craftsmanship all would have come to naught. Mr. Shannon, Mr. Alexander, Mr. Cuthbert, Mr. Maurleio, Mr. Burns, Mr. Galvin, Mr. Atkins, Mr. Sullivan, Mr. Higgins, and the workmen under their direction, have been assiduous and untiring in their efforts to produce the best possible results.

SCHOOL ARCHITECTURE.

riginal article prepared for this purpose by F. S. Allen, a school architect idena. The pictures illustrate some of his own work. Observe his idea of a pening in the ceiling or near the ceiling to draw off the hot air in warm s. The attic into which this opening leads should be freely open to the outer ough screens under the eaves.
colored outside cover of this book, designed by C. A. Rothe of Sacramento, a bit of Mr. Allen's work, the high school at National City, in San Diego , one of the best examples in the State of the pure Mission style. Doesn't a fine, distinctive, California flavor?

EAR SIR:

lying to yours of recent date would say that in my opinion the hing to be done for any school, whether in city or country, is to re large grounds, never less than one acre, while five acres are able.

unds.—The grounds should be high and rolling, so that a student se up a slight incline on approaching and *look up* to his seat of ng. Large grounds afford space for ample playgrounds, lawns, as, etc. All these things come in time to a school in an advancing nity.

ge grounds afford a chance for one-story schools, avoiding the ng of stairs. In cities where High Schools have to accommodate ,000 to 1,500 students, they should never be more than two stories with the first floor not over three feet from the ground—base- are not the place to educate the next generation.

of rooms.—The ordinary grade room, 24 by 30 feet, contains 720 feet of floor space and will seat 48 High School pupils at single allowing 15 square feet per pupil. If they are built larger, they oner or later be overcrowded, to the injustice of the pupil, teacher, xpayer. In a 10 or 12 room school one or two rooms might be large enough for 60 or 65 pupils in emergency cases—but better

High Schools the recitation rooms should vary from 16 by 20 to 0; about one half being 20 by 24. Rooms that are used for such work as bookkeeping, drawing, domestic science, manual arts and laboratories must of course be larger, and should vary in size ing to the size of the school.

ting.—The lighting schould always be from the left side of the and the window nearest the teacher should be about eight feet he end, while the last window at the other end might come as near

the rear wall as practicable. This rule, however, can not always be followed rigidly without seriously affecting the external design.

In the ordinary one-room school often found in the country districts, with three windows on each side and perhaps two in the rear, the defect in lighting can be remedied fairly well by painting the glass of the windows on the pupils' right and rear a solid black, thus receiving all of the light from the pupil's left. If this is insufficient, the light can be increased by the introduction of prismatic glass in the upper sash of the

CLOISTERS

Mr. Allen highly recommends cloisters for California schools, tempering the light and affording sheltered places for play.

windows at a very small cost. If still more light is needed, leave the black paint off the rear window nearest the left side and cover it with a white Holland shade, which diffuses the glare of light from the window.

Where fan ventilation is used all rooms would be best lighted from the north, but where there is no means of mechanical ventilation, the windows should be so placed as to admit sunlight into all rooms at some time of the day.

The best light for a schoolroom is north; next best, northeast; then south, then east, and lastly, west.

In schoolrooms lighted from one side only there should be two or three high transom panels on the opposite side above the blackboards, which could be opened for direct ventilation across the top of the room, in hot weather, when the windows must be open. These panels should be hinged at the bottom and be of wood or very dark glass that would admit no light.

Never put any windows in the rear of the room—they only throw the shadow of the pupil's head and shoulders on his desk and make a strong glare in the teacher's eyes. The bottom of the windows should be three or four feet from the floor, and the top as near the ceiling as possible. The proper amount of glass surface in the windows in relation to the floor space often varies according to the height and width of the room, but from 20 to 25 per cent is usual in a well-lighted room.

School at Claremont, built in the California style.

Venetian blinds are the best window shade to equalize the light; they should always be clear down and tilted at such an angle as to exclude the sun's rays only—then they will reflect the light on to the ceiling, which will re-reflect it to the far side of the room. They catch dust, it is true, but if let alone by the pupils and teacher, as they should be, this is no objection as they can be easily cleaned by the janitor.

The windows should never be opened when the ventilating fan is running, except by the engineer or janitor who has charge of the ventilating plant. No ventilating plant will ventilate all out of doors.

Ventilation.—In cold climates gravity ventilation works fairly well, but its efficiency is always more or less affected by the varying outside temperature and winds.

In mild climates, such as the southern part of California and the coast country, mechanical ventilation is absolutely necessary. This is accom-

plished best by a fan to drive the fresh air into the rooms. The fresh air inlet of a room should always be about one fourth larger than the foul air outlet; this keeps a slight pressure of air in the rooms and more or less goes out through window and door cracks, which prevents their letting in cold air. All foul air flues should take the air from the floor of the schoolroom, but in warm climates they should also have a large opening near the ceiling, which should be opened only in hot weather. to take off the hot air of the room. The ventilating fans may be driven

Entrance of Claremont School.

by steam or gas engines, electric or water motors, electricity being preferable.

Heating.—The heating may be done by anything that will raise the temperature of the fresh air taken from outside to the proper degree of heat, steam or hot water coils, cast iron or sheet steel furnaces. But this heat-radiating surface should always be placed in the heating chamber, which is usually in the basement, but could as well be on a level with the schoolrooms where mechanical ventilation is used.

In the small one or two-room country school, where mechanical ventilation is not feasible, very good results can be obtained by a large cast iron stove with a sheet iron inclosure, say 3 or 3½ feet in diameter, and extending from the floor to a point about seven feet high. There should be a fresh air duct with a damper, 12 by 24 inches, from the outside.

passing under the floor and opening around the bottom of the stove, thus affording fresh heated air to the rooms. There should also be a foul air duct about one foot in size built into the wall near the stove, with an opening at the floor; this duct, however, should be provided

Towers of the San Diego High School.

with a damper that could at times be closed to prevent back draughts when the fire is low.

The foul air flues from the schoolrooms can exhaust into the attic providing it is well ventilated, or can be run out through the top of the roof with practically equal results.

Wardrobes.—The wardrobes for grade schools are often arranged in different ways, but one of the best systems is to place them in the rear of the room in sections about two feet deep and five feet wide, with a rolling front to each, and leave a few small openings in the wardrobe ceiling so that some of the air from the room may pass out to a vent flue or the attic. This will dry the wet clothing when the fronts are closed to within an inch or two of the floor. These rolling fronts can be had with blackboard surface so as not to decrease the amount of blackboard in the room.

This type of wardrobe, while being ventilated, also takes less space than any other, is always under the teacher's eye, and avoids the temptation of thieving.

Blackboards.—A schoolroom should have blackboard space on all sides and be from three to four feet high for pupils and five feet for teachers. For the first and second grades it should not be over 18 or 20 inches from the floor, but for the seventh and eighth grades about 30 inches is best.

Regarding the kind: there is a very good kind of liquid slated paper or wood fibre brand that comes under various names from the factory, in sections about twelve feet long, and is tacked or glued upon the wall on a board back. It is very good for cheap or temporary buildings, but owing to its absorbent nature it often swells away from the wall in damp weather, or when placed upon a brick wall in a new building which contains more or less moisture. The most expensive blackboard is made of natural slate, and if it could be had equal to the samples shown would be very desirable, except for the joints which must occur and the bad spots which often come in part of the slabs. A good cheap board is made by glueing two or three thicknesses of a good quality of Manila paper upon a smooth plastered wall, and giving it two or three coats of liquid slating. Some artificial blackboards are made of ground slate, sand, cement and steel filings mixed into a mortar pulp and put on about one-eighth of an inch thick with a trowel. But this board, while it has no joints, is not satisfactory unless put on by an expert who can get a soft velvet surface to it.

There is a wide difference of opinion among teachers as to the best color for a blackboard—black, gray, green or brown. Plate glass, sand blasted on one side, is sometimes used; secured to the wall the same as natural slate and backed with any desired color of paint.

Tinting of Walls.—The walls and ceilings of a schoolroom should be colored in very soft tints—the creams are the easiest on the eyes, using nearly white for the ceiling, a darker shade for the walls, and a light tan for the wainscoting. Great care should be observed in using blue or

ɔen that they be not very strong, and never get a dark color above ighter one.

Plastering.—The plastering should always be a very fine sand finish ıt will not reflect a glare of light, but if the plaster is a smooth ɔweled finish the tinting or painting of the walls should be done in flat ors to obtain this result.

A schoolroom should not have wood wainscoting or baseboard; they ɔuld be of hard plaster or cement, troweled smooth and painted in flat ors or enamel, and may be marked off for tile if desired.

Drinking Fountains.—There is one made, known as the artesian ıntain, that has a small stream constantly flowing upward where one ı, by placing the mouth over the stream, soon learn to drink easily thout using a cup which is likely to be contaminated by disease. The ıte law should enforce their use. There should be drinking fountains ıced in the halls and playgrounds, easy of access.

Toilets.—The toilet rooms are a very important feature of schoolhouse ıstruction and had best be outside when there is no means of mechan- l ventilation. The best plan is not to supply them with fresh air, but have an ample foul air flue in which is placed a small electric fan, th the switch governing same located in the janitor's room, thus ɔing them positive ventilation even when the ventilating plant is not ɑning. This foul air flue should extend up through the roof and ve no other connection—the supply of fresh air will then leak into the let room from the rest of the building. Individual water-closet bowls ɜ the best but quite expensive. The long range are largely used, but ɜ disgusting. The dry closet has been used quite successfully when ll ventilated, but is not desirable owing to the likelihood of being glected. The dry earth closet is not desirable, where largely used, ing to the great amount of unpleasant work connected with it.

Where water and sewerage are available it is a good plan to have a ervice" room two or three feet wide behind the toilet stalls in which of the flush tanks and pipes can be placed entirely out of sight and ıch of the pupils. A small register, say six inches square, placed in ɜ wall behind each bowl will take all foul odors of the toilet room into ɜ service room where the foul air flue and electric fan draw the air ɔm the latter. It is desirable to keep the windows and outside doors toilet rooms always closed, so that the fan will have to draw its supply air from the school building proper as it passes through the toilets.

Urinals are the hardest things in the world to keep sweet and clean, t there are some makes of patented urinals that are very satisfactory. ɔwever, a great deal of the success of any kind largely depends upon ɜ janitor in keeping them clean. The secret of ventilating them is to

take the foul air off at the floor, either through the trough at the bottom or through ventilators at the ends, into a service room or ventilating flue supplied with an electric fan and connected with the flue from the toilets. Never try to ventilate a toilet room from any place but at the floor line.

Toilet rooms should have a smooth cement floor, walls and ceiling, and as little wood work as possible. The stall partitions should be made of cement plaster; each stall should have a 2 by 4 foot double acting door but no lock. The walls and ceilings should be given five or six coats of white enamel—and then kept clean. Never paint and sand a toilet room. The janitor should stay about the toilet rooms when they are most in use and see that they are properly treated. A child should be taught to take the same care of the school toilet room as he would take of the one at home.

Baths.—Every school should be supplied with one or more shower baths, both for boys and girls; they can be built at little expense and can be located in the same room with the toilets or in separate rooms. They should have two small dressing rooms, 3 by 5 feet, to each bath and should be built and finished the same as above described for toilet stalls.

Very truly yours,

F. S. ALLEN.

Oak tree in the middle of the road.

See this fine old tree, that has been preserved in spite of the march of improvement. It does not damage the appearance of this beautiful boulevard, but adorns it and adds to its charm. There is a lesson in this to hustling boomers who are eager to dig out trees to make room for sidewalks, gutters, curbs, fences, buildings. The trees are of more value than the improvements. Build around the trees, not through them; and they will give distinction to your neighborhood. Beautiful surroundings are an asset and they have a cash value that grows greater *as time goes on.*

HOW TO HIDE UGLY THINGS.

Here is a hint for screening the stables and outbuildings of a school. ese two pictures show a shed on the grounds of the California Poly-

chnic School at San Luis Obispo before and after it was covered by a nderful growth of the Australian pea vine. This vine is a perennial,

with evergreen foliage and clusters of rose-pink blossoms. Young plants may be secured around the base of the old ones by layering, or they may be grown from seed. The growth shown in the picture is four years old and it is still a thing of grace and beauty.

THE INTERIOR DECORATIONS OF SCHOOLS.

This keen and scholarly article is by Walter J. Kenyon, a California schoolmaster—it is taken from the School Review, November, 1906.

Our graded school requires of its pupils a classroom attendance of eight thousand hours. This is a heavy tribute to levy upon the period of childhood, and it may well purchase other things for the pupil than an acquisition merely of those weapons of traffic dear to the utilitarian's heart—the so-called rudiments. It is the present purpose to discuss some of those silent influences which, without interference with the traditional purpose of the school, make for a richer childhood and a better community.

The first of these concerns the color effects of the classroom. When a competent architect plans a schoolhouse, he presumes of course that, given due time for drying out, the plaster walls will be appropriately tinted or papered, and in such tones as will give a harmonious color unity to the whole room. It is noticeable, however, that in the average American schoolhouse this ideal is seldom consummated. We rush our furnishings in, and the painters and plasterers have hardly packed up their tools before the classes are settled in an established school routine. And as for those glaring white walls, we "first endure, then pity, then embrace," finally forgetting that the plan was ever otherwise.

There are reasons, however, beyond a mere æsthetic preference, why the schoolroom walls should not be left white. It is the common testimony of physicians that the glaring whitewash aggravates nervous afflictions and injures the eyes. Many a mother diagnoses her girl's nervous headache as a case of overstudy, when it is in reality a product of five hours' exposure to the harsh, blinding glare of the schoolroom walls. And many a boy is condemned as a wickedly disposed nuisance, when he merely exhibits a nervous irritation which a proper color scheme will abate. A well-known Massachusetts physician, Dr. Myles Standish, of Boston, says:

I have often seen children immediately and permanently recover from a persistent recurring diseased condition of the eyes when removed from a schoolroom with white walls, and sent elsewhere to school or kept at home, where the walls are tinted. The principal color of the walls should be of an even tone, so that the amount of light

cted will be the same from all parts of the surface, as waving or clouded effects rery trying to sensitive eyes. Any color may be placed in its proper position with rd to its safety for schoolroom walls by remembering the general rule with regard ie sensitiveness of the eye to the colors of the spectrum, which is, that the nearer color is to the red end of the spectrum, the more irritating it is to the eyes; and nearer the color is to the blue end of the spectrum, the easier it is to the eyes, i the single exception that the extreme violet rays also are irritating.

'rom this it will be seen that red and all its derivatives should be rigidly excluded, orange also is nearly as bad, while yellow should never be taken by preference. ens and blues are absolutely safe colors, and it is not at all necessary that the rs should be pronounced; the depth of the color should be made dependent upon amount of light coming in at the windows, and upon its quality, as, for instance, ther the windows have a northern or southern exposure, whether the sun's rays come directly into the room when the sun sinks low in the heavens in the middle winter afternoon, and other surrounding circumstances of each individual room.

'he color of the ceiling of a schoolroom is fully as important as the color of the s, particularly when there is any amount of reflected light.

ıll I have said with regard to the color of the walls is doubly true when applied he window shades, and this fact should always be taken into consideration in ıishing and decorating a schoolroom.

Medical science is constantly finding new and positive evidence of the hological effects of color. And it rests with any of us to make simple eriments which will show conclusively the influence of color upon the ɔtions. Look through a blue glass, and we see a sad, unhopeful prost, in the midst of which only the utmost exertion of will-power can tain a cheerful mood. Look through a red glass, and the reverse feel- is aroused. The outlook is one of exaggerated sunshine, which stimtes the imagination, induces a sanguine mood, and suggests action. ɜ blue-glass craze of the seventies was an incident which foredowed the wide employment of color as a remedial agent.

We are thus in possession of a more or less definite knowledge of the hology of color. We know that red is stimulating, irritating, unrest-. We know that blue is quieting, but also depressing. Since the ɔil of the elementary school spends eight thousand hours in actual endance in the classroom, it is of the highest importance to give him olor environment which will not, on the one hand, be a source of ɔression and melancholy, nor, on the other, an agent of excessive vous stimulation.

We have such a color in green of the quieter sort. There is a whole nut of greens, running from light apple down through the stone-ens, or "dried pea," to the deep, rich olives. This series is perfectly ıpted to the requirements of interior tinting, either for home or for ool. The distinction is often made between a north and south room, dish buffs and terra-cottas being recommended for the former. This tinction is not vital, however, and we always approach the danger ɜ as we move toward the red end of the spectrum. One of the most ightful school buildings it has been my good fortune to visit is tinted oughout, north and south rooms alike, in low stone-green. Another

building in the same city is tinted in blue (!)—the relic of a former régime—and the effect is so depressing that one experiences a sensible feeling of relief and renewed joy on once more regaining the outer air.

A combination beyond further desire is to be had by coloring the wainscoting and woodwork a deep olive, the walls up to the molding a middle sage-green, and, above that, the walls and ceiling a lighter and neutral stone-green; this combination, of course, with the real slate board. It goes without saying that this coloring shall be "dull finish."

A striking fact is to be noted just here. The blackboard, the recipient of endless obloquy at the hands of the æsthetic, ceases to offend where the walls are rightly tinted. Indeed, the real slate "blackboard" is never black at all, but a pleasing, quiet gray that has no quarrels. It is only a glaring white wall that thrusts the blackboard into undue prominence, and thus makes it a scapegoat for a fault not its own. Speaking of blackboards, the various experiments in tinting the board have proved anything but satisfactory. The logical and satisfactory combination is a tinted wall and a board of natural slate-gray. A room thus finished is fundamentally beautiful, and is not in urgent need of any further decoration. Speaking generally, we may say that a room properly tinted is nine tenths decorated.

I remember one school particularly, in Andover, when George E. Johnson was in charge. It had not exactly the "dim religious light," but a quality of air and color which one's home has, if he has a home. Its rooms were as cool as the aisles of the woods, and as mellow; rooms that seemed to have, in themselves, a personality, and to be sociable when empty. I used to think that not even a Jukes would play truant from such a school as that; and that no teacher, be she ever so mediocre, could quite annul the beneficence to the pupil of such a surrounding.

Regrettably, in the much-discussed topic of school decoration, this matter of wall-tinting has been rather slighted, the emphasis falling more upon pictures. This is partly due to the mad overproduction of the penny prints. With many a teacher the problem of law decoration seems to lie in how many penny pictures she can arrange on her white plaster wall, in friezes and borders, diamonds and circles. There is a principle in composition, very easily understood, which will serve us as a guide upon this point. It is that an aggregation of small, unrelated spots is distressful to the eye and scattering to the attention. It would be disastrous to one's equanimity to try to listen to a score of people, all shouting at once messages of unlike import. The nerve-racking effect of such a babel is precisely comparable to that produced by a motley collection of picture spots, scattering over the wall in a "promiscuous arrangement," as an old text-book writer used to say. In composing his picture, an artist is governed by certain principles of composition,

! of which is what Ruskin calls "principality," whereby all the of the sketch fall into an obedient relation to one dominant The minor color spots in the composition do not exist for and elves, but rather as organic parts of the entire sketch. In a very ıd general way, we are to conceive our wall just as the artist sketch, and every picture that goes upon it is to be subordinated :angement having in view the appearance of the entire wall.

ırst step in this direction is to gather up most of the small and set them together in panels of two or three, instead of them singly, each competing with all the rest. Three penny hich are merely a vexation to the spirit when pinned up sepbecome a genuine contribution to the decorative scheme of the en they are grouped upon a single panel of mounting-board, first heir margins cut away.* And even in the grouping of these pieces on their mount we are yet answerable to the laws of ion. The intervals between the pictures must be less than the around them. Otherwise a centrifugal effect is had, and that composition.

r we have two or three panels of the sort just described, together arger print or two of a kind referred to later, we have ample for our wall decoration. By all means refrain from overcrowd- walls. Remember that, while in a salon exhibit the problem is the pictures up, ours is a distinctly different one. It is to regard as a unit, whose hangings must only confirm its unity. And let ırselves, at the outset, of the prevailing didactical idea that we :orating" for the purpose of instruction. Nothing can be more to the decorative scheme than to start out with this purpose ıst. The underlying need is that the pictorial embellishment of shall present a few simple and well-asserted claims upon our ı, rather than many and divergent ones. A scattered rabble of ımants results in a dissipated attention, and this means nervous ıs and kindred things. It is a common experience to leave an ry with a backache or headache, or both; associated with aching a general nervous depression. And this condition is not a mere fatigue resultant upon walking, but a nerve exhaustion follow- ı a sustained attention to a great number of hangings, diverse hape, color, and subject, and having no mutual reference.

ıbject of frames is not so easily traversed. We may say, how- ıt, for school purposes at least, it is safest to avoid guady and gilded frames. The small passe partout framing is all that is

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hese mounts a material called "cover paper" is to be had at the wholesale ses. It costs about two cents a sheet (22 x 28), and offering every variety of ray, neutral green, etc., is both cheaper and better than the regular mount-

needed for prints and for most color pieces. And there is the argument for economy in its favor in that it may easily be done by the teacher herself, or by the more skillful pupils.

As to frames and mats in general, it is well to remember, with Ruskin, that the frame is "a little space of silence"—between the picture and the wall behind it. Where the wall presents one uniform tint it is not really so necessary that the frame should be neutral and "silent" as in cases where patterned wall-paper is used. But the general rule is to be held in mind that the frame is subservient to its picture and should not be too clamorous in its own right. Those ornate golden halos that are given away with pounds of tea are by all means to be avoided. The frame, in all ordinary cases (such as ours), should be exceedingly quiet and say little for itself, remembering that it is but frame, after all.

We are now confronted with the problem of the selection of our picture. First of all we perceive the danger of hanging colored chromos, or paintings. Because only cheap ones are within our means, they are tolerably certain to be bad. And, good or bad, their color schemes will more likely than not quarrel viciously with our wall tint. Thus limiting ourselves mainly to black and white, we may go a step farther and say: Throw out the half-tones, as far as we can afford. A half-tone is the style of print seen in the penny pictures and in most of the ten-cent magazines. It is just what its name implies—it is a print that has lost half of its tone, or virility of light and dark, in the process of reproduction. Examine any penny print under a hand-glass, and we perceive it to be cut up into microscopic dots. Compare it now with an etching, a photogravure, or a pen-and-ink, and this loss of tone is instantly appreciated.

Fortunately there are better things within the reach of the poorest of us. Most of the big art publishers issue, under various names, photogravure-like prints of the world's finest pictures. These are large, fine productions, generally on plates 22 by 28 inches, and they have all the depth and richness of tone of the photogravure. They are had in either black or sepia at the remarkably low price of fifty cents apiece. Such a picture, with its white border cut away and suitably matted, even in passe partout, is good hanging for the king's audience chamber. The generous size of these productions makes them especially appropriate for the schoolroom wall. One or two such pieces, well selected as to subject and reinforced by half a dozen smaller things, etchings or pen-and-ink drawings preferably, are enough for any classroom. By all means avoid overloading your wall and making the onlooker strabismic with a motley display.

But the most important consideration of all is as to the subjects we select. Let us avoid reading our own preferences too unreservedly into

children, and becoming their self-appointed proxies. The children e not that sense of historical values which is always in danger of ng their seniors a bias. We have not quite learned to distinguish ween that which is imposing, from the art curator's standpoint, and t which is inherently beautiful, regardless of its niche in the lore of

It is one thing to stock a museum of art with the conspicuous mile- ies of art history. It is quite another to decorate a children's room h things intrinsically beautiful—and beautiful *from the child's view- nt*. Imagine, for instance, dutifully hanging "Mona Lisa" in a de-room, simply because Leonardo did it! The pedagogical rush for lian women, particularly madonnas, has developed into a craze, on perfectly logical basis that the mother-and-child sentiment is appro- ate to our purpose. We have merely been guilty of a little oversight not directly perceiving that the mature and more or less ascetic con- tions of the Renaissance Italians, catering directly to the churchly als of that period, are not very well calculated to provide acceptable mma pictures for twentieth-century American babies. A sentiment of ther-love—yes, but it must be a mother-love that he can recognize. draws a keen line between sanctity in a niche and a genuine, unpose- motherhood. And so I say again, if our purpose is decorative rather n didactic, let us gather intrinsic, and, if necessary, unsigned, beauty, her than the mélange of the art museum.

Then again, the masters, who spoke first of all in color, can not be resented in the remotest degree by printer's ink—particularly in the f-tone; and all this bowing and scraping before "penny prints of masters" is about as near the real spirit of art as idol-worship is to uine religion. Supervisors of art and students of any sort who ress themselves to the educational problem are fearfully apt to mix their academic acquirements with their native appreciation until they take one for the other, and so disqualify themselves for the work in id. A while ago an inquiry was sent to several dozen artists, teachers, sidents of civic clubs, etc.—men and women who presumably had the tter most at heart—as to what pictures they would recommend for ool decoration. The answers, invariably cordial and enthusiastic, ost with one voice placed the "Sistine Madonna" at the head of the ! No stronger evidence could be presented of the incubus of hope- sly academic bias under which the subject rests. "The best in art one too good for the children," wrote Dr. Klemm. While everybody st agree heartily with this sentiment, what a curious miscarriage of as it is to set up the subjective and subtle as the one antithesis to the diocre! Mr. Vickery, of San Francisco, sounded a hopeful note in laring that "a good poster is infinitely better than a mediocre engrav- ." Ellen Gates Starr said: "Almost anything of Millet's is good;" l then, endorsing the mother-and-child sentiment for primary rooms,

she shortly mentioned Millet's "First Step," where others had chosen the "Sistine Madonna."

If we must have madonnas, why may we not take those three or four in which the mothers are in love with their babies and the babies themselves are kissable? Name over Feruzzi, Murillo (that one in the Pitti Gallery), Froschl, and, above them all, Courtois, and, I take it, we have about finished the list. And yet, of these incomparable painters of mother and child, three out of the four are unheard of in the levels where they would win their deserved appreciation if introduced. Add St. Anthony, with his strong natural appeal to adults and children alike, and the rest of our wall we need for less exalted subjects.

If we can once bolster up our common-sense with enough moral courage to leave off this indiscriminate goose-marching after madonnas, even the penny prints, which have come in for such ill-usage in this writing, will have their uses. Just think of Millet, Breton, and Dupré, with their fine realities; Adan and Meyer von Bremen, with their rollicking German sunshine, a ten minutes' bath in which is as good as a day in the country; Sir John Millais and Sir Joshua Reynolds with their galaxy of matchless little maids; and finally Jacques with his sheep, and Barber, Carter, and Adam with their household pets. Think of this diverse and all-satisfying company being put out of countenance and being thrust against the wall, so to speak, by an undifferentiated group of pallid and poseful madonnas, scarce a quartet of whom could either love or be loved, by the most amiable stretch of the imagination! Rather let us be at once exoteric and generous, and give the madonnas over to the sophisticated and tempered academician, to have and to hold for his very own.

Summarizing, let us leave out the mawkish pictures, on the one hand, and the too subtly religious ones, on the other, and make our choice among the sane, joyous, lovable things that are so readily to be had. The principles which nowadays guide us in the selection of children's literature have only to be applied in this question of children's art.

In every schoolroom there are jogs in the wall, narrow intervals between windows, etc., which are not adapted for the hanging of pictures, but are just right for the placing of plaster casts. Since these, even of the Della Robbia order (which have always been chosen with the madonnas), do not carry a particularly emotional significance, as do pictures, we shall have to base our selection upon somewhat different values. Their first utility is purely decorative, having in view the general scheme of the room; so that the shape, size, and general appearance of the piece have perhaps as much to do with our selection as the subject itself. The beautiful "Flying Mercury," for instance, is altogether too fragile to introduce into any schoolhouse. And any statuary for the *classroom, h*owever robust in its lines, should invariably be placed above

e six-foot level. Busts of authors and statesmen are as suitable as ıy others, not with the idea that many children will exhibit an intelli- ınt affection for them, but that they will pleasantly finish the appoint- ents and the color scheme of the room. To do this these casts must, course, have the ivory finish, which costs no more. Nothing (save a ue wall) is quite so persistently ugly as a plain plaster cast. Even the evitable dust of seasons does not soften its harsh unfriendliness; and, ı the other hand, there are few color spots in the room more grateful the eye than the embalmed sunshine of a bit of ivory-finished statuary.

Vying in importance with the pictures in the schoolroom are the ants. A sage-green room with a table full of growing things by the indow is an abode of joy, pictures left out of the question. And the fect is greatly enhanced if there be, beside the plants, or embowered nong them, a little aquarium with a goldfish dawdling in it.

A clever device for the purpose is in use in Stockton. The potted ants are set upon an ordinary cheap table, except that the top is zinc- ıed and sunk in for an inch; or, in other words, the edges of the top e raised that inch, making a shallow, zinc-lined trough. The flowers ın thus be watered without any danger of leakage, or of unsightly, arped table-tops.

Draperies in the schoolroom—except window curtains, periodically ashed—are universally condemned by all who have given the matter ought.

There is some diversity of opinion concerning animals in the school- om. Much is urged against caged life before the children. A corre- ondent covers the question thus: "I object to having animals confined r *entertainment* of young or old, at home or at school. But this allows some latitude, inasmuch as we may have much animal life about ıich is not, in a strict sense, confined. It requires an overwrought ıagination to commiserate a well-tended canary, for example." A tter on the subject refers pleasantly to "a tame, comfortable kind of ıimal, or goldfish in a globe, in which is a water plant growing." I ıew one class in which a dog or two were in fairly good attendance. ıey were orderly in deportment, and gave silent and continuous appro- ıtion to the whole programme. True enough, the teacher, in her fre- ıent rounds, had to step over an occasional barrier, but I do not recall ıy schoolroom, before or since, where the spirit was more homelike, holesome, and perfectly conducive to study.

To School Teachers:

Have you ever talked with your pupils about keeping the schoolroom neat and clean and the grounds attractive? Are there any pictures on the walls of your schoolroom? Does the floor need scrubbing? Are there any piles of rubbish in the yard?

ROOF PLAYGROUNDS.

[illegible] modern misery of our cities grows still more crowded as time goes on. It is becoming more necessary all the time to utilize every opportunity for getting a little more sun and air for the children. City children are [illegible] so as to use the house tops. Roof gardens and [illegible] of playgrounds are [illegible] in vogue.

In New York City during the summer vacation of 1907, there were [illegible] roof playgrounds that were open every evening save Sunday. In [illegible] reports [illegible] Maxwell, Miss E. E. Whitney, the

[illegible] says, "A competent director [illegible] was in charge of each roof, and [illegible] Parents and children alike were welcome [illegible] danger of overcrowding, the [illegible] always applied to the class desiring admission. With [illegible] exception, these guests were of [illegible] word of English, and it was [illegible] bright under the influences of [illegible] program is a typical one of

[illegible] ..... *Hester*
[illegible] ..... *Hester*
[illegible] ..... *Lawrence*
[illegible] ..... *Adams*
[illegible] ..... *Bell*
[illegible] ..... *Lawrence*
[illegible] ..... *Hester*
Lowell
[illegible] ..... *Adams*
Tilton ..... *Adams*

Commenting upon the influence of this work upon the young people Miss Whitney makes the following very significant statements: "A marked improvement was noticeable in the behavior of the young women; there was less boisterousness and more regard for the rights of others. A large percentage of girls attending roof playgrounds, work either in sweat shops or at some kind of drudgery; they come to these playgrounds for change of scene and thought, and no old country maidens on the village greens enjoyed dancing more than did these girls under the starry skies. They certainly carry a great deal of good cheer to their homes, doubtless dispelling gloom that otherwise might merge into crime. As the years pass by, the conviction deepens that happiness is a safeguard which can not be ignored." (Ninth Annual Report of City Superintendent of Schools to the Board of Education of the City of New York. 1907, p. 522*f*.)

To School Trustees:

How many years have elapsed since your schoolhouse has had a coat of paint? Is the building a credit to your community? Do you know that it does not cost a very large sum to paint the ordinary country schoolhouse?

WORK-ROOM FOR RURAL SCHOOLS.

Here is a good idea, from the Report of State Superintendent Stetson of Maine.

In every rural schoolhouse there should be a room about nine feet wide and twelve feet long, in which should be placed a small workbench and a few of the common tools used by carpenters. There should also be a limited supply of lumber suitable for making the implements, utensils and apparatus needed in the home, on the farm and in the school.

The room should also be provided with a small cook stove, a few of the utensils used in the ordinary kitchen, a sewing table and such other apparatus as are needed in making the plainer articles of wearing apparel.

This room should be furnished by the people of the community in which the school is located.

The teacher should encourage the children to make use of this work-room in constructing the material needed in the school and the home, and in preparing simple articles of food and in making some of the garments worn by the school children.

It will be much better if the teacher does not attempt to be severely scientific or technical. Most of the teachers do not and many of them

can not act as expert instructors in this work, but they may give general directions and, to an extent, oversee what is done. There will always be members of the school who will have an aptitude for the things in which the teacher has no special skill.

Let it be distinctly understood, from the start, that the teacher is not an instructor in manual training and does not pretend to be; but that she and the children, working together, can provide many necessary articles.

Many blunders will be made and much material will be wasted, but neither of these items should be discouraging. Perhaps there is no better way of learning how to do a thing than by the mistakes one makes in doing it. The knowledge and skill thus acquired develop taste, judgment, ability to meet emergencies and at the same time stimulate originality and invention. Best of all, these activities furnish an opportunity for the children to train their hands while they are using their heads. They also develop self-reliance, independence and love of manual labor and a desire to be physically useful in the world.

A room provided with the material described above and used by intelligent teachers and ambitious pupils will help to give us a student body that will be industrious, enterprising, skillful, self-supporting. It will help solve not a few industrial problems and will furnish a satisfactory answer to many troublesome moral and intellectual questions. It will help to keep the boys and girls in school and aid them in becoming intelligent and worthy citizens when they leave school.

There is a great opportunity for usefulness in this work and it is sincerely hoped that parents, school officials and teachers will appreciate the situation and make use of the advantages which such training will surely give.

To the County Superintendent:

Do you stand up for the Children when a new school is being built, even when you make an enemy of the contractor and run counter to an influential trustee? Do you refuse to allow windows wrongly placed, insufficient light, ineffective ventilation, improper heating? Do you make a study of these things, so that you can guard the Children's interests?

All that is part of your job.

THE GENERAL ARRANGEMENT AND REQUIREMENTS OF MODERN PUBLIC SCHOOL BUILDINGS.

An original article by Louis S. Stone, of the firm of Stone & Smith, school architects, San Francisco. Some of the finest school buildings of California have been planned by this veteran firm.

The Site.—The first consideration on the part of the school board should be to secure an ample site for their new building; one that is elevated sufficiently to insure good drainage, and so situated that the building can get the best facings for light.

Lighting.—In California it has been considered by authorities on light, that the easterly exposure for classrooms is the best. It has also been satisfactorily proved in practical work that school buildings facing

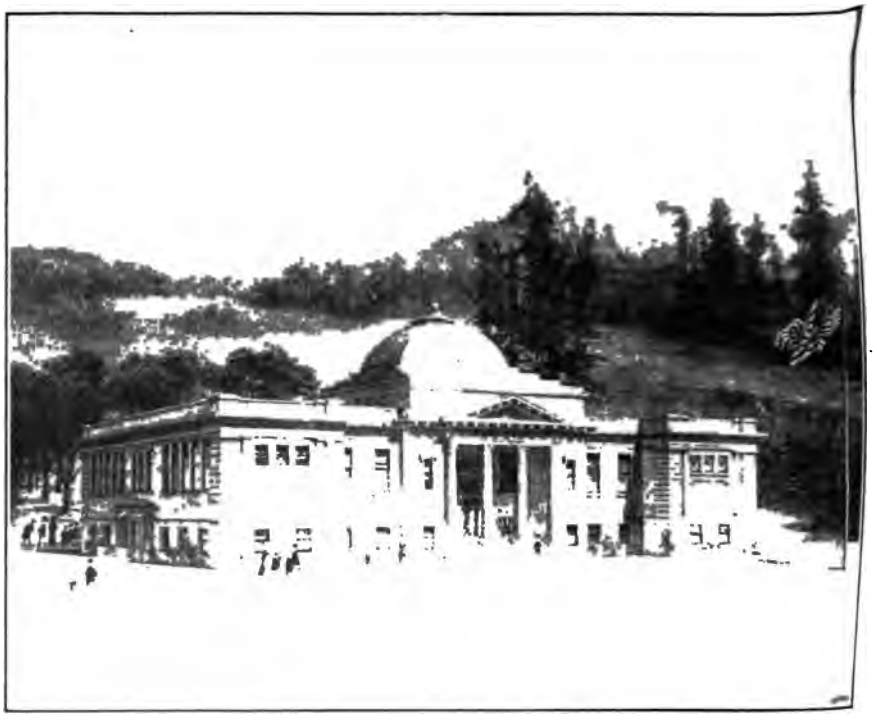
High School at Berkeley.

east or west can be more economically built than ones facing north or south if it is desired to obtain the east or west light.

The new school buildings in Oakland, recently completed, all face west, with a majority of their classrooms on the east side of the building, thereby obtaining what is considered the best lighting.

Arrangement of Windows.—The windows should be arranged on the long side of the room to the left of the pupil and massed together with very narrow mullions. The whole group of windows should start close to the rear wall, and should not come closer to the front wall of the schoolroom than seven feet, the window sills being from three and one half to four feet above the floor, and window heads as close to the ceiling as construction will permit. The heads of the windows should be square. There is quite a tendency on the part of architects to put in arched and round-headed windows to conform to some architectural effect desired

on the exterior. While it is desirable to have the exterior architecturally a thing of beauty, it is much more important to obtain correct lighting first. The round headed or arched windows invariably interfere with the best light and should not be permitted. These windows should be devoid of transoms, as the transom bar and additional space is an interruption to the full and complete lighting of the room. Sometimes for architectural effect it is advisable to place windows in the wall at the rear of the pupil. This is permissible, provided that the windows are



[illegible] Tioga County.

kept above the blackboard and provided with heavy shades, but they should never be placed in the wall facing the pupils.

Prismatic glass which increases the light 25 per cent and diffuses it evenly has been used very successfully, but unless there is some exterior obstruction to the admission of the light, or if the rooms are much wider than the ordinary width of 24 by 26 feet, prismatic glass will not be necessary.

Doors. There is a simple rule that classroom doors should open out, but this rule is very often broken. Care should be taken in planning to show the swing of the doors and see that when the door is open fully

does not interfere with other doors, projections or run into the stairway. In the designing of the schoolroom doors a very great improvement has been made in the use of either single panel doors or flush doors, the latter having absolutely smooth surface without mouldings or projections of any kind. This door collects practically no dust and simplifies the work of the janitor very materially. If single doors are used they should be not less than three and one half feet wide. If there is a tendency toward darkness in the halls, it is permissible to put transoms over the doors, but transoms are not necessary in the modern school

High School at Richmond, Contra Costa County.

buildings to help light or ventilate the schoolroom, in fact they are rather a detriment in these matters.

Heating and Ventilation.—There is only one thoroughly successful modern system of heating and ventilating, and that is the modern plenum blower system which insures an absolute supply of fresh air, warmed to the desired temperature and giving perfect ventilation. It is not always practical to put this system in smaller buildings only on account of the matter of cost.

A modern plenum system of heating and ventilating means that the heating plant is placed at a central point in the basement or in a separate building outside. Large heavy cast iron furnaces or steam coils are installed to heat the air. Then a blower of sufficient capacity to operate it at not over two hundred revolutions per minute blows the air from the fresh air room through individual ducts to each classroom,

the air coming in about eight feet above the floor. Similar ducts allow the egress of the air from the base of the room, and a continual inflow and outflow of fresh air is the result, if the ducts are properly proportioned. This can be obtained without any inconvenience of draughts. To complete a plenum system, automatic temperature control should be installed which regulates the temperature of each room without the aid of the teacher.

Where ventilation is not desired, a system of direct steam heating is probably the next best thing. This means the placing of steam radiators in the classrooms and will warm the air more evenly than any other cheap system, but for ventilation the windows will have to be depended upon.

Plumbing.—Too much care can not be given the proper sanitary appliances for school buildings. With a modern self-flushing and ventilated type of closets, similar to the "Morgan System" or the "Lewis & Kitchen Range System" or the "Individual Lewis & Kitchen Self-Acting Closet," placed in the basement of a building with a large ventilating stack furnished with a stack heater or electric exhaust fans, to induce good ventilation, no difficulty should arise from sanitary appliances. All of these methods mentioned are absolutely successful and require very little care. The stationary tank closet that is put in private residences should not be used in public school buildings, as there is no ventilating system attached to them and they get out of order too easily.

Sanitary drinking fountains are used very successfully in modern school buildings. These should be placed in convenient places and can be so regulated that a continual water jet is obtained from which the pupil drinks without a cup. Another kind has a foot valve which requires to be pressed down to obtain the water jet. These sanitary fountains do away with the necessity of cups, and lessen the danger from infection in school buildings very much.

Arrangement of Classrooms.—It has been already stated that the easterly light is considered the best. A good size for a classroom in a grammar school is 26 by 32 feet. This can be cut down to 24 feet in width. The standard size adopted by the new schools in Oakland is 24 by 32 feet. In grammar schools each classroom should have an individual hat and coat room at one end of the room opening only into the classroom, with a door at each side. These hat rooms should be five feet wide and as long as the width of the classroom, and should have an outside window. Where a modern plenum system of heating and ventilating is installed the outlet of the air from the classroom should be through the hat and coat room, thus preventing contamination of the air from the coat room to the classroom.

In the finishing of the interior of the schoolroom, greens for the walls ave been found very satisfactorily used, with cream colored ceilings. f Oregon pine finish is used a very pleasing effect can be obtained by aining the wood work brown oak, and finishing with a dull wax finish.

The floors of school buildings should be of maple, which will cost onsiderably more than Oregon pine flooring, but will save money in five ears to the department, in additional wearing qualities.

Every classroom should be equipped with a bookcase built in the walls. he best location for this bookcase is on the outer wall between the roup of windows and the front wall of the room. This space is the ast available for blackboards.

Regarding the blackboards, there is a great difference of opinion. he author has found green Hyloplate blackboard very satisfactory, fter ten years use, and then again where the Hyloplate has been poorly ut up there has been trouble.

In every school building there should be a retiring room for each sex, laced on the first and second story and a room for the teacher, inde- endent of the principal's office.

Every two-story school building should have at least two broad stair- ases, broken by landings considerably wider than the staircase. These taircases should be well separated so as to give the best opportunity or use in case of fire.

There are a great many other features about modern school buildings hich the author has met in his experience, but the points touched upon n this article cover the principal features that should be closely looked fter to obtain a successful plan.

I will say in conclusion that it is just as necessary for a one classroom chool building to be arranged properly for light and heat, as a fifty oom building.

In many cases the small cost of the building is an excuse for per- etuating mistakes which are absolutely unnecessary.

To the Teacher:

Is your school library fit for a visitor to see it? Is the trash cleared out and burned? Are the books neatly arranged? Or is it a wilderness of torn charts, dog-eared books, ragged maps, kindling wood, dictionary holders, feather dusters, broken desks, all tossed into inextricable confusion?

SCHOOL GARDENS IN LOS ANGELES.

School gardens probably produce their greatest results in the crowded life of the cities. It is of wonderful interest to the children of the slums to see things grow it stirs within them new instincts of life and beauty. These photographs illustrate some of the work done in the Utah Street School in the city of Los Angeles.

Result of school garden upon a home in the slum districts.

Prize winners in raising flowers.

To the School Trustees:

What do you see when you visit the school? Are the floors and walls unclean? Is the furniture old, worn, ink splotched, unvarnished? Are the curtains and maps raggedly flapping in the wind? Is the stove propped up by a brick? Does the stovepipe sag hopelessly? Is the plastering falling off?

If so, how long, O Lord, how long?

Prize winners in raising vegetables.

Working in the school garden.

ıy One who visits the School:
the windows extend up to the ceiling? Are the windows all to the left
ı pupils? Is there a space of at least 8 feet in front of the pupils with-
/indows entirely? Is there any way for fresh air to get in? Is there
vay for foul air to get out?
ıot, there is something rotten in Denmark.

SCHOOL PLAYGROUNDS.

This is an original article, prepared for this purpose by J. H. Reed, the Tree Warden of Riverside. Mr. Reed has spent a long and useful life in the teaching of schools and in the adornment of a beautiful city by the culture of countless thousands of trees.

A Place for Larger Playground.

There is a lot of outdoor room in this country yet, and our boys and girls, housed five or six hours a day in the schoolroom, should have their fair share of it, for their playgrounds. The equipment in physical strength and general health, after the real battle of life commences, as well as while this mental furnishing is going on, to say nothing of the good times due these children in the mean time, is certainly of equal importance with the mental equipment being sought for. And during this school day portion of life, the facilities and management of the school playground may have *very much* to do with this physical equipment.

The scientific gymnastic training or formal exercise that may be carried on in limited space does not serve the purpose for boys and girls. It is frolic and fun-producing games, requiring plenty of room, that they demand and their needs require.

To turn several hundred children on to a patch of ground so limited that as many score would barely find room for their games, their fun and frolic, is as serious a wrong as to overcrowd their study and classrooms.

Our country schools of one or two departments, should have at least an acre for the playground, and not but a little patch for the school building, the children being forced to the street or adjoining fields for their games and frolic.

In many of our young, rapidly growing towns, a location for the school building is selected, with grounds barely adequate for the needs of the few score of children to be first provided for. In a few years an addition to the building is required for increased numbers. New conditions prohibiting extending the grounds, save at large expense, the original ground is often made to serve several times the number for which it was first intended. Either the playground should be increased in proportion to the increased capacity of the building, or a new building where ample grounds are available should be provided in place of an addition to the old. Even at material increase of cost, and even convenience of location.

The additional few thousand dollars and some inconvenience can not be set off against the health and physical building of the succeeding sets of hundreds of children, as they come and go during the many years the building will be occupied.

No better investment can be made by a town than the money spent in providing ample playgrounds for the successive generations of children, to whom they will minister health, strength and gladness.

Playground Supervision.

Should there be some appreciative direction of sports, games, and conduct on the school playground, or should the children be let loose like a lot of young colts in their corral to have their fun out in their own wild way? Certainly there should be no formal rules or harsh strictures that would repress the freedom of the sports of the children. But it seems

A corner of the grounds at the Victoria School, in Riverside County. Surely it is better for little children to breathe and grow in such a place as this than mid scenes of squalid desolation. James Mills is the school clerk who is responsible for these beautiful grounds.

to me some judicious direction may be given to games and frolic, if done wisely, by one thoroughly in sympathy with fun-loving children, and whose business it is to look after this part of their education.

Among boys and girls, as well as men and women, there are always masterful spirits who insist on ruling, often in an overbearing way. Then there are the timid spirits and physically weak, who need the benefit of cheerful play the most. A wise supervision that would hold the former in check, and encourage and urge on the latter, from day to day, week in and week out, I am sure would be of real and great value.

Besides, there is the opportunity of suggesting new or improved games and exercises, and in a quiet way of encouraging fair play.

I believe the average boy and average girl, when starting to school, is honest-minded and well-intentioned, but we well know that in large companies there are exceptions, whose evil influence is gradually insinuated into the minds of the naturally good, like a poison. Much of this baneful influence on the playground I think may be prevented if it is somebody's business to be advised of these bad characters, and discreetly manage to prevent the contamination.

It seems to me that some wise supervision on the playground, beyond what is practicable for the teachers to give, may accomplish much for both the health and morals of the children, especially when assembled in large numbers. In the country and other isolated and comparatively small schools, the teachers can manage the matter very well, but in our large town schools it seems to me that this department of school work is of sufficient importance to demand special service—a professor or directress of playgrounds, if you please—chosen with direct reference to his or her special fitness for the delicate and important duties.

The School Playground Should be Beautified.

I recently visited one of our southern California towns somewhat noted for its beauty, because in the "well to do" portion the streets margins and residence frontages are adorned with trees, flowers and well-kept lawns, with a beautiful little park near by where visitors go and exclaim, "What a beautiful city." In another part of the town, where the work-a-day people live, where most of the children are raised, I found street after street with scarcely a tree to relieve their barrenness, with but here and there a cheerful frontage with lawn and flowers. In the midst of this dreary section I found a children's playground—a good-sized lot, surrounded by a homely board fence, utterly unrelieved by tree, shrub or flower. It reminded me more of a corral where mules are kept over night rather than what a children's playground should be.

It is in such neighborhoods that the school grounds should be made bright and attractive by plant and tree adornment—so easily secured in our California climate. The lack of this on so many school grounds has no little to do with the bare, uninviting surroundings of so many of the homes made by the grown up scholars when their school days are over. The taste for the beautiful things nature has so lavishly provided for us, and which should be a joy and inspiration through life, needs to be cultivated during the school years.

These playgrounds may be adorned without interfering with their special purpose. The trees should be chosen intelligently with reference to their adaptation to this special use. Short-lived trees should not be planted, nor such as require special care.

The margins of the grounds may be planted to tall growing trees. Where not too cold some of the eucalyptus family serve well for this purpose. Farther north some conifers make beautiful borders; the *Cedrus deodar* serves the purpose especially well where the lower branches can remain.

Small clumps of shrubs or small growing trees may be placed in corners or on division lines between playgrounds. Some of the acacias do well for this purpose. There are spots in all reasonably large grounds where

A fine pepper tree near the Victoria School, in Riverside County. The pepper is the best school tree wherever it will grow. It stands drouth and forgives neglect; and if it has half a chance, it grows into a magnificent old tree, that weaves itself into the landscape and into the traditions of the school.

single trees can be placed without interfering with games—some of our native trees, as the Sequoia or the common redwood, a beautiful tree when young, and stately when grown—can be placed to advantage. Then there are trees that will bear pruning high that can be grown on any part of the grounds, giving grateful, shady resting places without interfering with play. Of these the pepper, our most graceful, beautiful shade tree of the south, should be utilized. It will quickly grow up out of the way and in a brief time protect a large space from the hot sun. Farther north the slower growing oak can be used for this purpose. Where climatic conditions allow some of the poplars should find room in some of the out of the way spots.

The playgrounds should by no means be cumbered with trees. But a few properly selected and wisely placed will wonderfully transform the appearance of the ordinary bare school playgrounds, without, to any material degree, interfering with children's sports.

The bare feature parts of the school grounds should not reach to the building. A narrow border of grass, a bed of flowers, or low growing shrubs should surround the house except at the entrances.

Outhouses and sheds should be covered with some sort of climbing plant.

A little intelligent effort, with a very moderate expense, will give attractive premises for the children's play hours, and add to their pleasure when these glad days are but a memory.

AN OLD-FASHIONED SCHOOL.

Old-fashioned, yes; but how cosy and comfortable it looks. The children who grew up here will look back at their old school with pleasure and delight. Some one has been caring for it. It has a homelike atmosphere, making strong contrast to the forsaken, barnlike aspect of so many rural schools.

All public-spirited and intelligent people will agree with Dr. Draper, in his plea for more beautiful schoolhouses and school grounds, when he says: "If we see a building that is attractive, with trees about it, and with some green sod and flower beds in the summer time, and with a whole and bright American flag floating over it, we shall be likely to find that things are about as they should be inside. If the building look ugly and the grounds unkempt and the flag ragged, we shall be likely to find that the schoolhouse is dirty and unhealthful. We shall also be likely to find that the teacher is lazy and the pupils listless and the work of little account." (See Youth's Companion for February 14, 1901.)

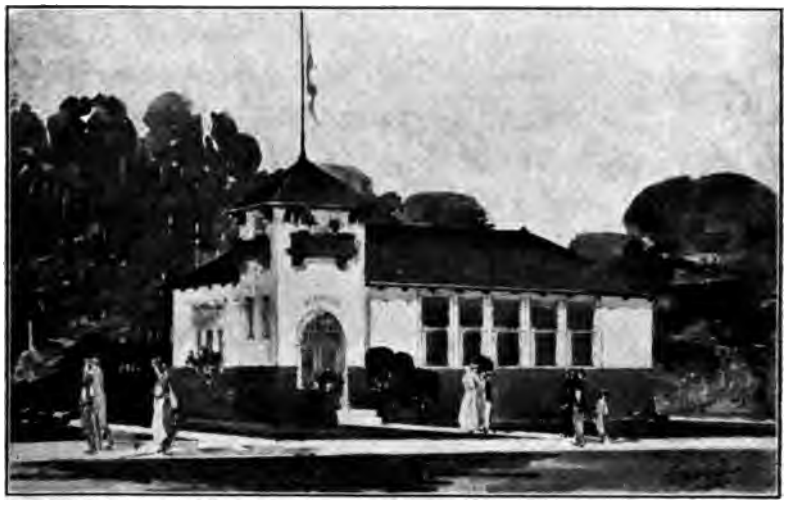
SMALL SCHOOL BUILDINGS.

By WALTER H. PARKER, 244 Kearney street, San Francisco, Cal.

Mr. Parker is a School Architect of San Francisco. He has been kind enough to prepare this article with its illustrations for this special purpose.

Apparent disagreements may possibly be detected in the articles by the various architects and school men who have written for this volume. This is quite natural. Different individuals have different viewpoints and varying opinions. The book does not undertake to prescribe some arbitrary and dogmatic set of rules, but rather to show the present ideas of some of our people who ought to know.

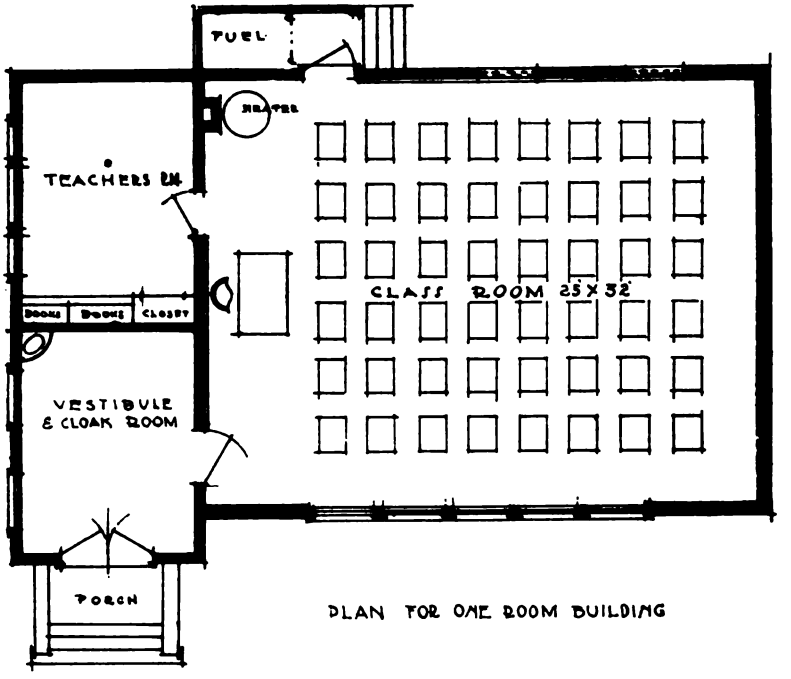
Any building, especially a public building, should indicate the use for which it is intended. It should be an example of good taste to the community, and by combining utility and beauty of design should have



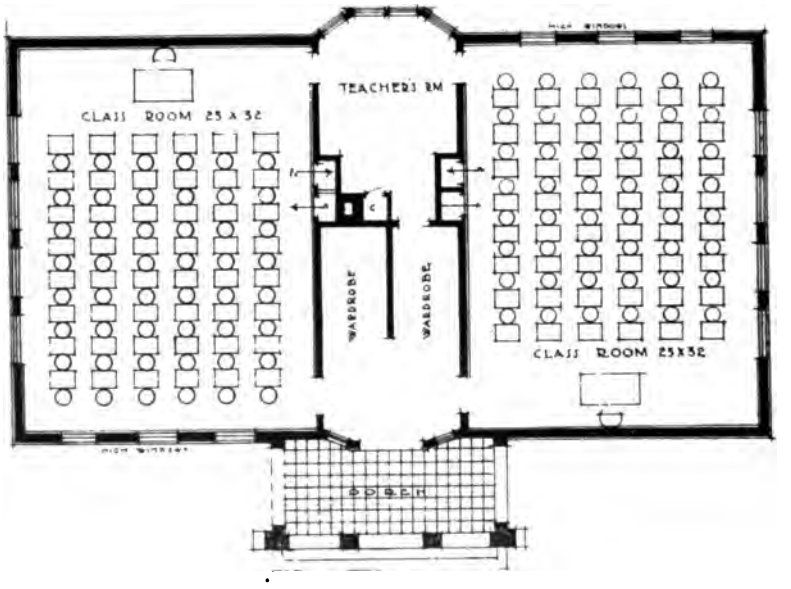
Frame building, one-room school.

an educational effect upon all who enter it. School trustees often say: "We can not afford a building combining those qualities," but the fact is that good proportion and good lines in a building do not depend on cost. It may harmonize with its surroundings, yet be built with the most available material. It may be attractive without being expensive. Wood, the most common building material, is the most natural one for a rural school on account of low cost and ease of obtaining it, and in using it even rough boards may be put together practically and gracefully. In some localities stone, brick, plaster, and cement may be used cheaply and made very effective, if properly handled.

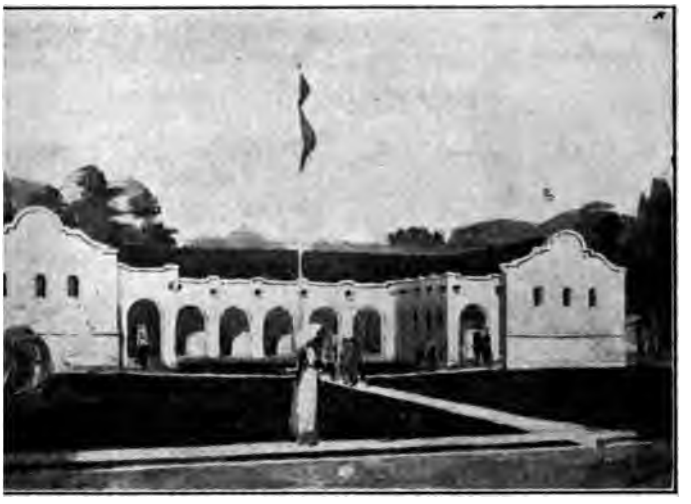
One of the important problems of school boards is the planning of a new building, and mistakes are often made, both in the external appearance and by bad lighting, heating, and sanitation. This may be



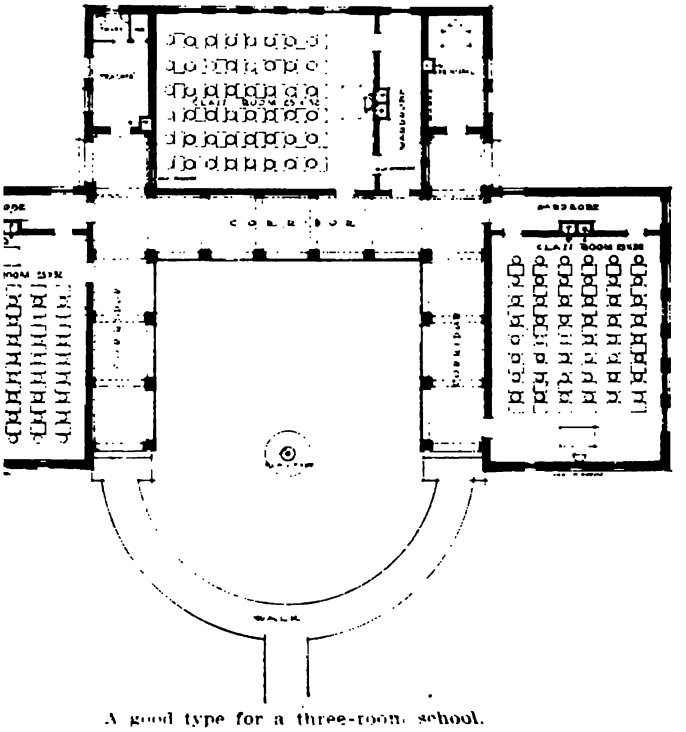
PLAN FOR ONE ROOM BUILDING



A two-room building.

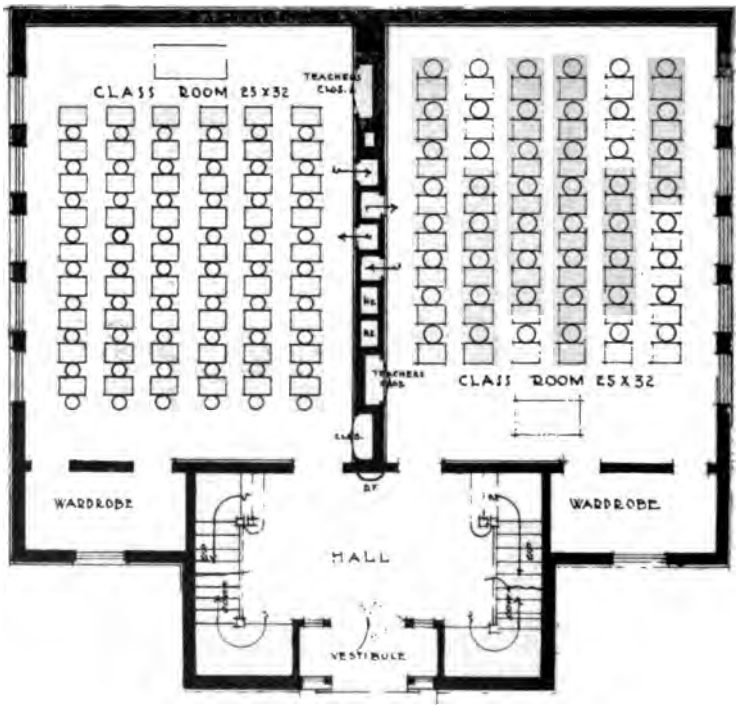


A building in the Mission style, always one-story.



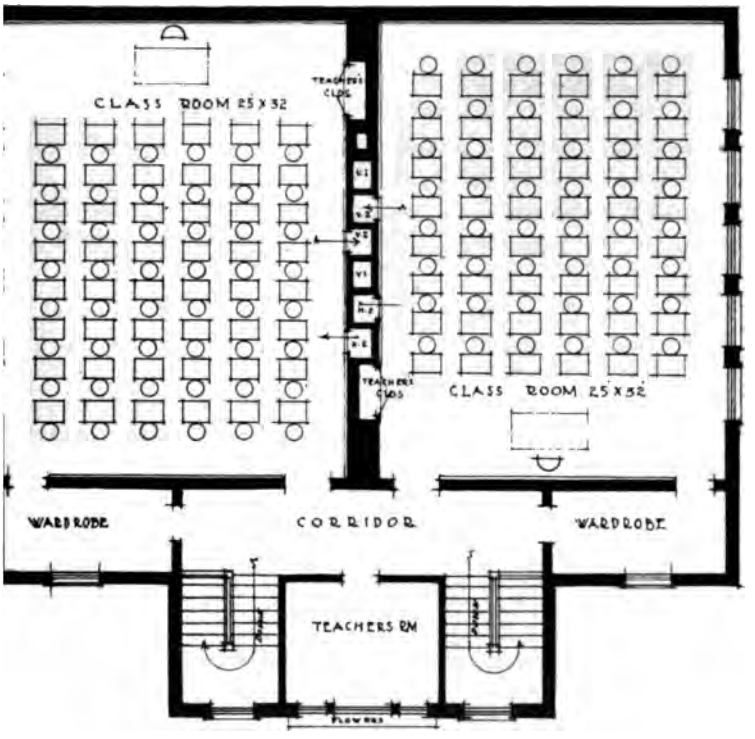
A good type for a three-room school.

A four-room building.



First floor plan, four-room school.

) financial limitations, but is more often through lack of knowledge
: rules and principles of modern school construction.
:hoosing a site, the selection should be made with a view to natural
age, east and south exposure if possible, and ready accessibility
the main thoroughfare. If there are trees on the ground, so much
ətter, but they should not be allowed to obstruct the windows, as
reat factor in any hygienic room, "good light," also often means
l air." Having secured a suitable site, the building is the next
em.
a one-room school, a good arrangement may be found in the above
which has a combination entry and cloakroom. In addition to the
lroom proper, there should be a small teacher's room. In any com-



Second floor plan, four-room school.

:chool building, the classroom should be twenty-five feet wide and
-two feet long. A greater length is undesirable as being too far
.e voice to carry readily, or to read writing on the blackboard with
The width of twenty-five feet is not too great to interfere with
r lighting of the side of the room farthest from the windows. This
25 by 32, makes a room large enough to seat forty-eight pupils in
:ammar grades (eight rows of seats, six in each row), or fifty-four

primary pupils (nine rows, six in each row), all that one teacher can properly handle. If the room is built with a 12½ foot ceiling, this size allows 16⅔ cubic feet for space to each pupil, with forty-eight in the room, or 14.8 cubic feet, with fifty-four pupils. Aisles should be eighteen inches wide.

In the economical expenditure of public funds for education, the physical welfare of the children should be considered a matter of importance. Defective lighting of a schoolroom, which may impair the eyesight of a number of pupils, should not be tolerated for a moment in this enlightened era. Authorities agree that the light should come over the left shoulder of the pupil, and that the glass area should equal, approximately, one fifth the floor space. Windows should not be located with view to the exterior architectural effect, but should be closely grouped, forming as nearly as possible one large window. Occasionally windows are placed elsewhere than on the left side of the room, but in such cases their use is not to supply light for the pupils, but to be used in flushing the room with sunlight and air when the pupils are outside.

The requirements for a two-room building are similar to those for a one-room building, as described above. It will be found desirable to arrange the floor plan so as to locate the teacher's room between the two classrooms. The furnace and fuel room can be in the basement, which need not be large.

The accompanying plan for a three-room building is suitable for localities where the climate is hot during the school year. The cloistered court provides ready communication between all the rooms, and allows the best ventilation, as well as adding to the looks of the building.

Blackboards should be slate, where possible. If for any reason composition boards are used, the preparation should be put over a well-seasoned board backing, and no time should be wasted with manufacturers who will not guarantee their boards for at least two years. A dull black is the best color.

Windows should be about three feet from the floor and extend to within one foot of the ceiling, where possible. Transoms are not desirable, though sometimes introduced for architectural effect.

In a four-room school, a two-story building makes for economy in construction, and basement playgrounds for inclement weather may be included in the plan.

The rooms should have a sand finish, with cove ceilings. The walls should be tinted a light color, and the woodwork stained in natural color, or light brown, with dull finish. The floor will wear better and be most easily kept clean if oiled or coated with floor preparation.

Toilets are not usually placed in a rural school building, though they may be, by putting a storage tank in the attic, or a pneumatic tank *underground*, near the building. If used, they should be of some first-

lass make, with good plumbing installed throughout. A cesspool or eptic tank for sewage disposal in rural districts may be cheaply nstalled and give good results.

A simple and inexpensive heating system will provide admirably for small school. The use of heaters having an intake of air piped from he outside is recommended. Such an intake should be sheltered from trong winds, which otherwise will interfere with the uniform working f the draft.

In planning the building, the surroundings should be well considered. nd the final general appearance of the whole held to be of greatest mportance. A lawn in front of the school always adds a pleasing eature, and is entirely practical if sufficient acreage has been secured or ample playgrounds. As a final word, the author makes a plea for etter buildings, as he frankly believes their influence for good is greater lan the average citizen realizes.

JUDGING SCHOOLHOUSE PLANS.

An original article by Superintendent Mark Keppel of Los Angeles County. If iperintendents will carefully read this and put it in practice and STICK TO IT—the hoolhouses of the State will grow better.

In considering plans for schoolhouses I consider, first, the relative :eas of the building and of the total inside area of the schoolrooms. If ıe total inside area of the schoolrooms is not above 50 per cent of the ıtire area of the schoolhouse I refuse to approve the plans.

Second, I consider the size and shape of the schoolrooms. The ıallest acceptable schoolroom should have an inside floor area of 750 uare feet and the largest rooms should have 864 square feet. The eferable dimensions for the smaller rooms are 25 by 30 feet inside. ıd for the larger rooms 27 by 32 feet inside.

Buildings of two or more rooms may have an equal number of rooms ntaining 750 and 864 square feet of floor space.

Third, I consider the lighting of the rooms. I insist upon having ndows upon the left side and at the rear of the room. I realize that is rule is out of harmony with the views of many teachers, and con- ıry to the practice of many architects. However, I believe that even- ally architects and teachers will revert to the bilateral system of ;hting. Except for rooms with a northern exposure, unilateral light- g seems difficult to justify. The windows serve the two purposes of ;hting and ventilating.

Rooms having any exposure except the north one, receive the full od of the sunlight at some hour of the day. At that time the admis- m of light from that particular exposure is impossible, if comfort is be considered.

If the room has a side and a rear battery of windows, a full flood of high light can be had from side or rear at every hour of the day, and a wise use of window shades will protect the pupils from the direct rays of the sun as it journeys past the first and second rows of windows. The ventilation of schoolrooms is seldom satisfactory except when attained by a forced draught system, or by having the windows open on two sides of the room.

The forced draught system is necessary in cold or stormy weather, and the window system is most highly desirable whenever the weather permits.

The position of the windows is vital. Each row should be grouped as nearly solid as is possible. The piece of wall between two windows should not exceed twelve inches in width and a less width is better.

The rear battery of windows should be placed equidistant from the side walls. The side battery of windows should begin within two feet of the rear wall and should not approach nearer the front wall than eight feet, and the front wall, *i. e.*, the wall which the children are to face, should not have windows, transoms or glass doors. The children should face the softest light of the room. The windows should be high, preferably without transoms, but if transoms are used each of these should not exceed one foot in total width.

Fourth, I consider the sanitation of the building by sunlight, and insist that as far as is *possible* every *closet*, *hallway*, *room* and *office* shall be open to direct sunlight at least once daily.

Fifth, I consider the heating plans. The furnace must not be under exits unless the furnace is in a fireproof chamber. The furnace arms must be short and direct and should never exceed 50 feet in length. If greater length is necessary more furnaces is the only safe remedy.

Sixth, I consider the provisions for the school's right-hand, the district library. It must have adequate space, good ventilation and lighting and heating facilities, and should be easily accessible.

Seventh, I consider the provisions for the comfort of the teachers and of the public in dealing with the school and wish for an office, a rest room, etc.

Eighth, I consider the plans for the toilets and refuse to approve any plans until the toilet plans are satisfactory. This is necessary even for a house of one room. The reason for much of the vicious condition which prevails in school toilets is due to the uninviting, even sinister, influence of the toilets themselves. These seem to say to their users, "evil conditions are desired here, be sure you do your part in making conditions worse."

Ninth, I consider the question of beauty with regard to the building. Other things being right, the more beautiful the building, the more its

ance of being approved. However, I refuse absolutely to sacrifice the rpose of the house, *i. e.*, the work of a school, the life, the comfort, the ppiness of its children and teachers, to any so-called law of symmetry insistent plan of so-called beauty.

GOOD USE OF PUBLIC MONEY.

It is perfectly legitimate to use school money in helping little children play. Their *plays* are quite as important to their future as their

tudies—probably more so. Do not hesitate to fix swings, teeter boards, ennis courts, ball grounds and everything else that will encourage the hildren to play, not because it pleases them, but because it is necessary o their health and development. The above is a view of a school ground n Napa County.

To the Parent:

Do you look at the water-closets of your school? Are they well kept, wholesome places, fit for modest and decent children to use? If not, go right after the Trustees and the Janitor and the Teacher and ask why.

SUGGESTION FROM THE DESERT.

A teacher from the Colorado Desert makes the following recommendation.

You ask in the December Journal for hints on the construction of schoolhouses. I have but a small one to make, but one I should like very much to see tried. Wherever blackboards corner in a schoolroom, there should be set diagonally across the corner a plate-glass mirror, such as was formerly seen in the Pasadena electric cars, about ten inches across, and the height of the blackboard. It would serve two purposes. It would contribute much to neatness of person among pupils, by allowing them to see their reflection frequently, and most important of all, it would allow a teacher, who might desire to work a little at the board, an opportunity to see almost any part of his room without turning around. It would also be a handsome ornament to the schoolroom.

F. S. HAFFORD.

PRELIMINARY OUTLINES.

City Superintendent James A. Barr of Stockton makes some good suggestions for cities having schoolhouses to build and school grounds to improve; and then goes on to illustrate them, as below. This will be of interest and value to city school boards. He says:

My experience leads me to believe that in calling for schoolhouse plans it is well to submit to competing architects a carefully drawn outline giving a definite idea of just what is wanted. This standardizes the competition, places all architects on the same basis, relieves the school officials from going over matters in detail with each architect and secures better results.

I enclose such an outline that has been used in Stockton with very good effect.

OFFICE OF THE SECRETARY OF THE BOARD OF EDUCATION
OF THE CITY OF STOCKTON, MARCH 1, 1900.

The Board of Education of the city of Stockton, desiring to erect a building for the accommodation of pupils in the First ward of said city, invites architects to submit competitive plans, specifications and estimates for the erection of said building in strict accordance with the following conditions:

A one-story building with the Spanish-Mission architecture throughout, including tile roof, is desired.

The building to be erected on the southeast quarter of block M west, said quarter block having a frontage of 151½ feet on Monroe street (facing east) and of 151½ feet on Washington street (facing south).

The drawings of the floor plans and elevations to be upon white paper tracing cloth, to be rendered in black ink at a scale of one eighth (⅛) an inch to the foot, and to be only in straight lines, the drawings to consist of the following:

1) Front elevation.
2) Side elevation.
3) Perspective showing front and side elevations (to be taken from southeast corner).
4) Basement plan.
5) Floor plan.
6) Longitudinal section.

The lettering of the plans to enumerate only the dimensions and uses of the various rooms and apparatus and names of architects.

The specifications to describe in outline the materials to be used in the construction of the building, and the apparatus to be made a part of the building, which apparatus must include a system of sanitary water closets and urinals, and a full modern system of heating and ventilating the entire building, including playrooms in the basement.

The specifications to be accompanied by an estimate of the cost of the building complete.

The building is to be constructed of brick. The inside finish to be in natural wood, so finished as to be without shining and reflecting surfaces.

The basement is to be 8½ or 9 feet in the clear above grade level of ground (which is to be graded, approximately, 2 feet above street grade).

The basement to contain all the necessary water closets and urinals, the heating apparatus, fresh air room or rooms, fuel room or rooms, lavatories, small room for janitor's supplies, and two rooms to be used as lunch and play rooms.

The building to contain four classrooms, each 27 by 36 feet. Each classroom to contain (in the walls) a closet for specimens to be so arranged, in part with sliding glass doors, as to have a pleasing effect in the room. Each classroom to be provided with a teacher's wardrobe, having a floor space of about twenty square feet and furnished with a stationary wash basin and with a closet in the wall for supplies and towels. Each wardrobe is to be provided with a window for outside lighting. Each classroom to be provided with picture molding.

Each classroom to be lighted (*a*) from the long side and as much to the rear as possible, or (*b*) from the long side (and toward the rear) and back (and to the left); in either case in such a manner that the light will fall over the left shoulders of the pupils. The windows to extend to as near the ceiling as construction will permit. The bottoms of windows to be not less than three feet from the floor. The window surface to be not less than one fifth of the floor surface.

All classrooms, offices, halls, recitation rooms, wardrobes and closets

throughout the building (including basement) to be provided with a "cove" ceiling.

The building to be provided with an office for the principal. Principal's office to contain ample closet room for supplies for building, for general library of building, for school exhibit and for collections, and to be well lighted, so that it may be used as a reading room.

The building to be provided with cloakrooms, which must be well lighted, heated and ventilated.

The halls and stairways to be broad, ample and well lighted. The main hallway should be at least 12 feet in width. Entrances from basement to main hall are desired. Risers should not exceed five and one half inches.

Blackboard (kind to be approved by the board) to occupy all available space around classrooms, the vertical width to be not less than 48 inches, provided that on the side of the room behind the teacher's desk the board shall be 72 inches wide.

While architects must keep the cost of the proposed building within the prescribed limit, and while the conditions laid down must be followed, they are to have full liberty in planning and in adding such conveniences as they may desire.

The building ready for occupancy, complete in every particular, including all necessary heating apparatus, water closets, sanitary and other appointments throughout, with the exception of movable furniture, must not exceed in cost the sum of $15,000, excluding the architect's commission and cost of superintending the construction of said building.

The author of the plans, specifications and estimates first in merit (if any such be so considered by the board) shall be paid the sum of $150, which, in the event of the plans, specifications and estimates not being used, shall be final payment for the same, the said plans and specifications to become the property of the board.

The author of the plans, specifications and estimates second in merit (if any such be so considered by the board) shall receive the sum of $100.

If any of the plans be used at any time in the construction of a building in the city of Stockton the architect shall be paid the usual commission of 3½ per cent for working plans and complete specifications and detail drawings, or 5 per cent for complete services, including supervision, if the successful architect be selected by the board to supervise the construction of the building; in either case less the amount previously paid, providing, however, that no additional compensation shall be allowed the architect if the lowest and best bid for the construction of the building complete exceeds the sum of $15,000.

The Board of Education reserves the right to reject any and all plans, specifications and estimates submitted.

The Board of Education reserves the right to employ a superintendent of construction.

All plans, specifications and estimates submitted will be received by the Board of Education, room I, High School Building, up to 7:30 o'clock P. M., April 19, 1900.

THE PROBLEM OF THE RURAL SCHOOL.

An original article prepared for this purpose by Prof. I. P. Roberts, who was for thirty years Dean of the College of Agriculture in Cornell University. He is now professor emeritus of Cornell, and resides in California.

As one visits the rural schools of California he is at once struck by the youthful appearance of those who attend them. The teachers are generally young ladies of tender years, often just trying their pinions to see if they can fly; the pupils, few in number, are almost always very young, and the lads and lasses of middle youth are conspicuous by their absence. Wherever the income of the farmer will permit the adolescents have been sent to the higher schools in the cities and villages; where it will not they are often at home at work because their services are necessary to help secure the family living. But not infrequently they have dropped out because of lack of interest, and sometimes they have even learned to hate the schoolroom actively just at the most critical period of their lives. This is not surprising, for the rural schoolhouses are generally unattractive, their surroundings barren and depressing, and the young people, unconsciously craving something more inspiring than the routine grammar school studies, are discouraged and repelled by what is offered them.

To discover the cause of this condition of things we do not need to go far afield. The income of the farmer in a large majority of cases is so small—especially of those engaged in raising cereals—that their natural interest in education is obliterated by the never-ending struggle to keep the farm from the sheriff and food on the table. In 1900 the average yield of wheat in California was a little less than fourteen bushels per acre and the average price a trifle over fifty-five cents, which yields an average income per acre of seven dollars and seventy-three cents. The yield per acre has probably not increased since 1900, but the average price per bushel has increased about ten per cent. This would make the average income from an acre of wheat in this State about eight dollars and a half at the present time.

The other cereals and hay make scarcely a better showing. Although those engaged in growing fruits, berries and nuts received a far more liberal reward for their labor and investment, their total product in 1900 constituted only about one quarter of the value of all farm produce; while the cereals and hay yielded more than 40 per cent of the total value of all farm crops. The fruit-growers are to a very large extent a suburban class and are able to send their older children into town to school; but the children of the general farmer and of families in the mining and lumbering regions must get their mental training and stimulus from the district school.

It is evident, therefore, that the support of the country schools, not only by taxation, but by the interest and intelligence of the parents, will depend chiefly on the profits of those engaged in producing hay and cereals. If the farmers were sufficiently prosperous and intelligent they would settle their own school question by demanding and securing more experienced teachers, a better equipment and a more rational curriculum. That a large section of them can not be prosperous is clear when we remember that eight dollars and a half is an average income per acre and therefore one half of the acreage must yield less than this.

They have robbed and are robbing the land of its productive power. While those lands which still retain much of their pristine productiveness are yielding forty bushels per acre over large areas, the average of the State is less than fourteen bushels—that is, one half of this acreage is yielding much less than fourteen bushels. This is, in fact, starvation: the crops are starved and inevitably the population on the land is starving too. These people may not be facing physical hunger as do the desperate poor in the cities—for the farm can always be made to yield the last necessary shelter and food—but since there is no margin of profit they must lack many of the ordinary comforts of life and be starving for the deeper necessities of the mind and spirit.

This state of a considerable section of the rural population in California is the direct result of a lack of knowledge of the fundamental principles of successful agriculture. Thus we have a fatal round: ignorance has led the farmer to rob the soil of its fertility; waning productiveness has made him poorer and poorer; and poverty prevents his children from going to school and the farmer from taking that vital and intelligent interest in the rural schools which would keep them up to the standard of the progressive town school. In such a dilemma there seems to be only one practicable remedy: the Government should come to the aid of the rural school as it came to the assistance of the institutions of higher learning forty-five years ago. The Universities and colleges did not and could not then provide instruction in agriculture, the mechanic arts and allied technical subjects. Under the Morrill land grant state agricultural and engineering colleges have been established.

either as separate institutions or in connection with state universities already in existence, and the result has been a marvelous development of the higher scientific education.

By some such state or Federal aid the rural school may be reorganized and revivified so that it will hold the country children at home instead of letting them drift away to the congested centers of population, and —what is of even greater importance—so that it can keep the interest of the youth who are now dropping out because of uninspiring methods and the lack of application of the things which they learn to the vital practical problems about them.

A second remedy, which may be applied in some measure at once, is the broadening of the ideal of the country school until it shall become the social center of the whole countryside. In my dreams I see this rural center housed in a large, plain, attractive building, fitted with kitchen and assembly hall for public meetings—social, recreative, educational and religious; a building which will furnish conveniences for carrying on all those activities which the country people desire and need; a place in which any one who has anything to say or do which will improve any phase of rural life or which might stimulate to noble endeavor, should find a rostrum and a welcome; a central meeting place, perhaps for two or more districts, where agriculture will be taught the young and old, and where handicrafts and domestic economy will be taught alongside the three R's.

The social schoolhouse will be located in an ample area, with sheds for teams, with trees and flowers, with athletic grounds, with a kitchen garden, and with good roads leading to it from every part of the district. This center will be presided over by a graduate of one of the agricultural colleges who will give all his time and energies to the public welfare and who will be the leader in all things helpful. He must receive a living salary and his position will be a permanent one, for he should live near by in a cottage set in the midst of a small holding where he can illustrate some of the methods and the value of the subjects taught.

It has taken forty years to establish firmly the agricultural and engineering colleges, but it should not take so long to revive and socialize the rural schools. Certainly the solution of the country school question is not in sending country children long distances to the town schools, but in making the district schools as good as the city schools; their course of study more applicable to the problems of country life; and in making the farmer himself prosperous and intelligent, so that he can keep abreast of modern educational progress.

CALIFORNIA SCHOOL NECESSITIES.

Shade to play in, seats to eat lunches on, swings and p
they are *necessities* to children nowadays, no less than books
The picture above shows the grounds of the Longfellow Scho
side County.

Sometimes a stingy or a narrow man will say, "What's th

[illegible] as good
It's better tha
[illegible] The
example of
[illegible] misery

THE ARRANGEMENT OF WINDOWS.

We have attempted to show, in part, by the following cuts, some defects in the lighting of schoolhouses, and how the windows are arranged to get the best results. Both good and bad are printed, in order that these points may be brought out with emphasis, by the contrast. The criticisms were written by a competent architect, who prefers not to have his name printed as a public critic of his competitors, but who has written with impartial judgment. It should also be noted that these cuts of exteriors can show only the lighting arrangement, and possibly some of the examples of good lighting shown here may have badly planned interiors.

...ts for this article were kindly furnished by Mr. William George Bruce, editor of the famous School Board Journal, of Milwaukee.

Public school, No. 153, New York. C. B. J. Snyder, Supt. of School Buildings.

This is one of the best arrangements of windows. Note that the light enters from only one side of a room, and the windows are so close together that the piers between them do not cast heavy shadows.

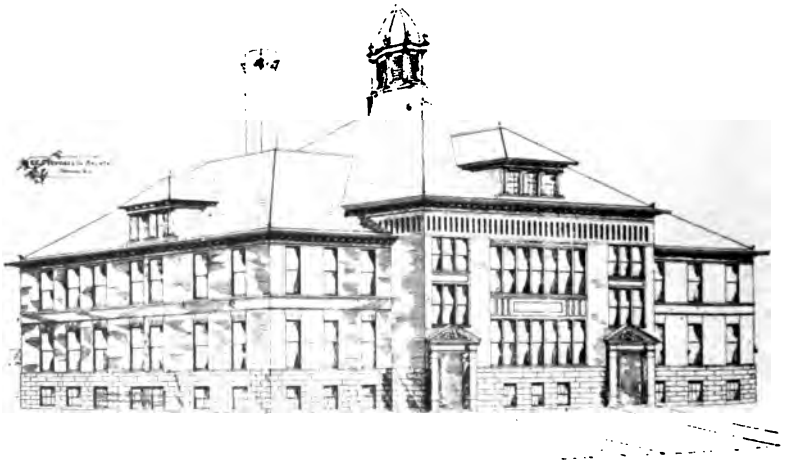
Public school, No. 127, Brooklyn, N. Y. C. B. J. Snyder, Supt. of School Buildings.

Another good piece of work by the same man. A well-lighted building. A pity it is so *high*. *Stairways* are a curse to growing girls.

Tenth Ward School, Milwaukee, Wis. Van Ryn & De Gelleke, Architects.

An excellent example of bad lighting. The windows are simply holes punched in all sides of the building, at regular intervals. This sort of a thing is not by any means confined to Milwaukee, however.

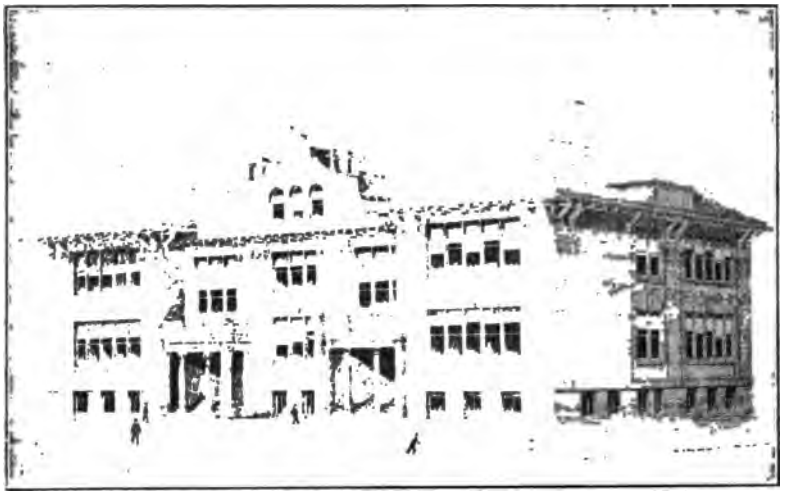
Too high. We should afford enough land in America for our children to get sunshine and air space. Ought to have a roof playground.



New Thirteenth Ward School, Oshkosh, Wis. E. E. Stevens & Co., Architects, Oshkosh.

In the same class as the preceding one. Bad, very bad!.

It will be comforting for rural trustees to observe that the architects sometimes fall into the same errors found in the little red schoolhouse with equidistant windows on four sides.



Longfellow School, Boise, Idaho. Wayland & Fennell, Architects.

Ideal: light from the left side only, and as little space as possible between the windows.

South Boston High School, Boston, Mass. Herbert D. Hale, Architect.

Abominable for study purposes, and too high, too many stairs to climb. Big city schools that can't afford room for children to live healthfully, that find it necessary to pile up so many stories, they should sell their high-priced land and go further out where the sun shines and where a decent space may be obtained.

New B to Lake S[illegible] Seattle, Wash. James Stephen, Architect

This shows that the architect knew how to arrange his light. It is fine.

Observe the blank wall. When the skilled architect of a great city school is not afraid of blank walls, why should the rest of us shy off at the idea?

[illegible] Architect.

Another splendid [illegible] by the same man. See how he avoids the fault pointed out on page 57. A magnificent roof garden, for gymnasiums or playgrounds, could have been made on this huge building.

New High School, Plainview, Minn. Chandler & Park, Architects, Racine, Wis.

This arrangement is very good indeed, but would have been improved by leaving off the small high windows at the rear of the room, and would have been about perfect had the side windows been placed as close together as in the buildings shown on opposite page.

New High School, Berlin, Wis. Van Ryn & De Gelleke, Architects.

This is in the same class as the preceding one; perhaps a little worse.

The Hazelton School, Flint, Mich. Clark & Munger, Architects, Bay City, Mich.

This picture indicates that neither the architect nor the school board had ever heard of the right way to light a schoolroom.

Saginaw Street School, Flint, Mich. Clark & Munger, Architects, Bay City

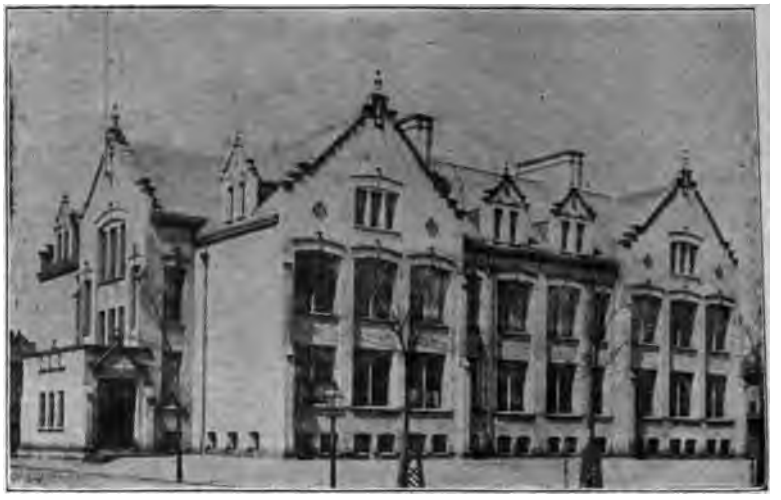
Exactly similar to the one shown above. Avoid these types as you would a pestilence.

New Public School, No. 61, Buffalo, N. Y. Howard L. Beck, Architect.

is has the light from one side only, but has large piers in the center, h cast big shadows. Compare this with the cuts on page 56, and e how the defect could have been obviated.

ew Grammar School, Pasadena, Calif. Stone & Smith, Architects, San Francisco, Calif.

good California example. More and more the Mission style is com- nto use. It is usually one story; and is well adapted to California ıcape and climate.



Fifth District Primary School, Milwaukee, Wis. Ferry & Clas, Architects.

This would be improved if the windows were closer together. Heavy shadows are cast by the large piers between. Notice the blank wall. Why shouldn't it be blank if no light is needed there?

WATER-CLOSETS IN RURAL SCHOOLS.

To improve a thing we must reform its worst points. Unquestionably, the worst point about the rural school is its water-closets. As a rule, these closets, particularly those of the boys, are in a filthy and shameless condition—and for a very good reason—because they are not cleaned and inspected properly. It seems to be a self-perpetuating nuisance—the boys of to-day continually see these buildings in a wet, unwholesome condition, marked by every obscene device and thought that can be made by knife or pencil or chalk. They become familiar with these things and *expect* them to be so—and they *are* so, and continue so when the boys grow to be the men.

It is a bad thing for our small children to come in constant contact with uncleanness and immorality on their school grounds. This condition is not found at the homes; why should we tolerate it at the school? If we can clean up the school closets and keep them clean, it will be a fine piece of work, one that we shall have a right to be proud of—no less praiseworthy than floating the American flag from the schoolhouse or planting it about with trees.

The way to accomplish this reform is this:

First, put the closets into thoroughly good condition—clean, new, brightly painted, with no suggestion of their old rottenness to be seen at all. Hinged seats should be provided, or urinals of wood or iron. Sanded walls are a good thing, too. Everything should be made of double strength, so that rough and heavy use can not damage it.

Second, turn the clean closets over to the teacher and janitor, and insist upon their having the same attention as other school property—daily sweeping and scrubbing when necessary and constant watchfulness. The teacher will be able to manage the children if she is held responsible for it; and if outside trespassers offend, bring them to justice if possible, but let the school *repair the injury at once.* Furnish the janitor with paint, disinfectants, tools, when he needs them. Have a distinct understanding with the janitor as to the things to be done. Let the trustee inspect the closets whenever he goes near, and make somebody smoke for every neglect—and they will stay clean!

Some of the leading superintendents of the State have been asked to briefly reply to the question "What kind of a water-closet do you advise for a rural school?"

Their answers follow herewith. Observe that nearly every one prescribes *inspection* and *care* as the essential points.

ADVICE FROM COUNTY SUPERINTENDENTS.

A closet in the country school district should be of sufficient size to accommodate the needs of the school, neat in appearance, well ventilated, thoroughly painted and most important of all regularly cleansed and disinfected.

Yours very truly,

FRANK C. WELLS,
Of Calaveras County.

I advise an ordinary water-closet six feet by six feet, and seven feet high. There should be not more than two openings, with a bar or board just above them to prevent boys from getting on the seat with their feet. There should be a galvanized-iron or porcelain lined urinal in one corner of the boys' closet.

But no closet will long remain in a decent condition unless the teacher will constantly inspect the place. I urge constant and close inspection.

F. E. DARKE,
Of San Luis Obispo County.

Walls of monolithic concrete, rough.

Dry vault.

Cottage roof, eighteen inches above walls thus providing light and ventilation.

Sunk urinal for boys; opening into vault directly.
Seats slanting from small to large.
Seats sloping to prevent standing on them.
Building proportioned to size of school.

S. B. Wilson,
Of El Dorado County.

A water-closet with pit, or vault, and no means of drainage, should have no door, but rather a screen, extending across the opening, and perhaps around the corners of the building, far enough away to leave a reasonably wide passageway. At the rear of the building, a ventilating tube should lead from the pit up through the roof, projecting far enough to carry away all gases. All this tends to free ventilation and the admission of sunlight.

W. B. Phillibee,
Of Lassen County.

The best water-closet for a country school, where a flush-tank and good cesspool are not available, is a dry earth closet. The seat should be built over a large box partly filled with loose earth and supplied with stout wheels. The equipment of the building, which should be of a fair size and well ventilated, would be the school ash can and an iron shovel. The children should be instructed to spread a liberal shovelful of ashes over the excrescence.

The contents of the box must be buried at least once every two weeks and at each removal fresh earth should replace the old. The closet must be swept frequently. This sort of a closet is sanitary and it will be found to be remarkably free from odors.

Roy W. Cloud,
Of San Mateo County.

One of the most satisfactory toilets for rural schools is the self-evaporating, built on the same lines as the ordinary toilet, with the exception of a flue extending from about ten feet above the roof to the vault below, so arranged that most all the effete matter evaporates; all that is necessary to keep it perfectly sanitary is to put some disinfectant in the vault about once a month.

Toilets for the boys and the girls should be as far apart as possible, and if possible there should be a toilet for the smaller boys and one for the larger. I believe that the unclean, unkept toilet is one of the greatest sources of evil in the schools.

W. H. Greenhalgh,
Of Amador County.

ıe matter of a suitable water-closet for rural schools is to-day one of nost serious problems that present themselves to school people. The that everywhere there is so little attention paid to the proper sani- conditions, as well as an almost utter neglect of the coarse, immoral that surrounds nearly all water-closets, demand from school officials est thought and very close attention. For the betterment of the ent conditions, I would recommend that in all cases of old buildings e unsightly by the use of knife and pencil that the structure be royed entirely and in its place a new, substantial, well arranged ling be erected. This structure should be made of corrugated iron, ething to resist the small boy with the knife. Every year this ling should receive a coat of paint—the very effort to keep it fresh sightly would command respect. The old buildings, if not de- yed, should be papered and painted; then plant trees and vines nd them so as to lend some degree of privacy. As for vaults, let ı be deep; and, to improve the sanitary conditions, let them receive eral sprinkling of lime, ashes, or dust from the road, every week, or er, each day. Add to these conditions regular, thoughtful super- on on the part of the teacher, and the serious difficulties surrounding r-closets of the rural schools will fade away.

L. W. Babcock,
Of Mendocino County.

ıe location, construction and care of the water-closet, in rural dis- s, are matters that should receive much more consideration than is ılly given them by either boards of trustees or the public generally. o often this building is placed in some conspicuous part of the ol yard, the entrance in full view, not only of every child on the ınds, but often also of passersby along the road. Not one thought of child's right to privacy has been shown. We expect the children to v up modest and pure, and yet we compel them, by our thoughtless- and carelessness, to action that must blunt the sense of modesty of most refined among them.

he water-closet is often built to accommodate but two persons when it ıld be built for ten. In some cases, on the boys' side of the yard, no rate urinal has been constructed. Such conditions can but educate abits of filthiness. The smooth white walls are an invitation for the ession of vulgar, and, oftentimes, vile thoughts.

ow for ideal conditions. Two buildings, one in each of the remotest ers of the yard, of ample room to accommodate the children.

o expense should be considered too great in insuring privacy on the to and in the building. Walls covered with a preparation that will t knife, pencil, or chalk. On the boys' side, a urinal that will lutely serve the purpose for which it was constructed.

With a little care, in most rural districts, arbors of vines could be constructed leading to the closets, the closets themselves being screened by a lattice covered with vines.

If, then, the closets are kept supplied with a generous amount of chloride of lime, conditions would be more nearly ideal.

E. W. LINDSAY,
Of Fresno County.

I advise the best possible type of water-closet obtainable. I prefer toilets which flush automatically. However, I presume the discussion is to apply to the really rural school, where only one schoolroom is used and the water supply is insufficient. For such schools I advise simple wooden structures built over deep cesspools. The house itself should be made of lumber of the quality used in the schoolhouse. Its frame should be made of timbers at least 3 by 4 inches in size, and should be strongly put together, so that the pranks of the wind or of boys will not wreck the building, and so that it can be moved if necessary without injury to the structure. The boys' water-closet should be provided with a urinal whose drain pipe is large enough to permit the passage through it of a baseball. Small-sized drain pipes have rendered most urinals worse than useless. The seats should be arranged so that the seat board can be taken out. The building should be ventilated scientifically, and the fumes from the cesspool should escape outside of and not through the toilet-room. The building should be well painted and should be thoroughly sanded to a height of six feet. Each outhouse should be protected by an L-shaped fence-shield six feet in height, so that the entrance to the toilet-room shall be hidden from view. The shield-fence should be well built and well painted. As soon as nature can do the work, a fast growing creeping vine should be trained over this shield fence, thus making a beauty spot of what is usually an eyesore. If there is an ample water supply, and waste must drain into a cesspool, there should be separate cesspools for the toilets and for the waste from other sources. The cesspool abomination is often due to the oversupply of water from drinking waste and from washrooms. The matter of water-closets ought to be determined by the superintendent when he approves plans for schoolhouses.

MARK KEPPEL,
Of Los Angeles.

It is difficult to determine the kind of water-closets which should be built at rural schools. That rural schools should have better accommodations in this line all will agree.

If all rural schools were supplied with flowing water piped to the grounds flush toilets and a septic tank should be used. Most of our rural

ols, however, have no such water supply. In such districts the
ır-closet becomes a much harder problem to solve.

ıe great defects of the rural water-closet are its size, appearance, and manner in which it is constructed. It is such an unsightly build- as a rule, that no one ever thinks of keeping up its appearance.

ıe water-closets at rural schools should be made much larger than now are. They should be artistically designed and finished inside out even better than the schoolhouse itself. The toilets within ld be at least modestly located. They should be well constructed properly adapted to the sizes of the children.

ıe vault is the important part of a non-flush toilet. It should be ed in such a way as not to interfere with the corners or foundation ıe building, should be of ample size and should extend some dis- ɜ beyond the rear line of the foundation. As in the case of the c tank or vault, it should have concrete sides or walls, and a drain . The projecting surface should be closely covered or have a vent or chamber, of equal sectional area and air-tight in construction, ıding upward beyond the roof. The whole vault should be air-tight ɜ construction, allowing no air to enter excepting that which passes ıgh the seats. Every opening or hole should have a cover so ed that when out of use it would, by the action of gravity, be closed. ood supply of dry earth—loam or vegetable mold—should be kept ıe building and freely used when necessary. These vaults should eaned out, through the projecting opening, every summer vacation the contents removed from the school grounds.

ıe great difficulty in keeping toilets clean arises from the boys' ıl, or more properly from the absence of it. The want of a urinal ts in rendering the seats unfit for use, and this in turn leads to ɜes which make the whole closet unfit for occupancy. Every water- t should have a urinal constructed out of lead or enameled steel, and nnected by a lead pipe with the septic tank or the vault drain pipe. herever the water supply of the school comes from, the urinal should ıshed out every night and thoroughly washed once a week.

e bad condition of water-closets is not due to bad construction . Much of it can be laid at the door of the school janitor, and not le belongs to the teacher. The janitor is often a janitress—a girl woman. They always feel that the full round of duty is ful- when the floor is swept and the desks dusted and the teachers are too modest to mention the closets.

e teachers should put the care of the closets on the first round of duty and see that they are kept clean and fit for use.

JAMES B. DAVIDSON,
Of Marin County.

HORIZONTAL BAR.

Every school ought to have a turning pole for the children. Here is one at the St. Helena School, in Napa County. The posts should be heavy, 4 by 6 or 6 by 6, with square holes at varying heights for the bar. The bar should not be made of iron pipe, for that is slippery and

dangerous; but of hickory wood, with square ends. It should be 6 feet long, with a diameter of 1¼ inches. The ground beneath should be spaded up now and then to keep it soft. If a foot of sawdust or coarse manure is kept under it, so much the better. That will avoid broken bones.

THE VALUE AND NEED OF LARGER SCHOOL PLAYGROUNDS.

By Dr. F. B. Dressiar, formerly of the University of California, now of the University of Alabama. The accompanying pictures are by the courtesy of the Playground Association of America.

The instinct for play is one of the most urgent demands of child nature; and the proper equipment of playgrounds is a necessary duty of all parents and school authorities. If children, and in fact, the young of all the higher animals, were not endowed with the instinct for play, were not led into a life of activity through the solicitations of this natural impulse, normal development of their physical life would be

"We like to play. Don't you?"

impossible, and the most important phases of their educational progress permanently hindered.

No gymnasium, however adequate its equipment, can take the place of ample playgrounds where children may play freely, undirected and unhindered. The gymnasium, under the wise direction of one who knows what is needed, is in the case of defectives of great importance. But the necessary restrictions of a well-ordered gymnasium are in the main uncongenial to the normal play-loving child. It is very rare indeed to find the zest and spirit of play permeating the work of gymnastics for school children, even when a full supply of apparatus is at hand. Those calisthenic exercises, which are prescribed in the lower grades of our public schools, are too frequently carried out under a silent protest and with the mark of the tedium of it in every movement

and feature of the children. About all the fun derived from this work is gotten by the mischievous boy, who makes it the occasion for clownish contortions or roguish drives at some unsuspecting neighbor.

However, it is neither my purpose nor my desire to say aught against physical culture as practiced in gymnastics, for I heartily approve of this work when it is adjusted to its proper task; but there is a desire to emphasize the fact that free, unhindered and undirected plays are more potent as exercises for normal children than any prescribed work-fun ever devised. Children who from the first have had proper opportunities for play need very little or no direction in their games; but it

[illegible] with sand court on the margin. What [illegible] would be attached to any big California school! Cost [illegible] spend too much on the children.

[illegible] found that those who have been prevented from engaging [illegible] free open-air games do need direction when they are later [illegible] to playgrounds. They seem not to know what to do. They have acquired the same fear from their fellows, and hence have to [illegible] to some one. Some, because of the early loss of opportunity, [illegible] to play, and take to bullying. For these reasons super- [illegible] Mr. Lee of the Boston Civic League says, "The most [illegible] of cardinal importance in the whole play- [illegible] skating, our unsupervised city playgrounds are apt to be mere disorganized running about—different in respect from what the boys are doing in the neighboring street—varied by shooting craps and other gambling games. In short, the unsupervised city playground has so far not been a success; and what is *especially* surprising, it is the playground in the crowded districts

where one would expect them to be of the greatest value, that have been least successful." (See, Constructive and Preventive Philanthropy, by Joseph Lee; page 170. MacMillan.)

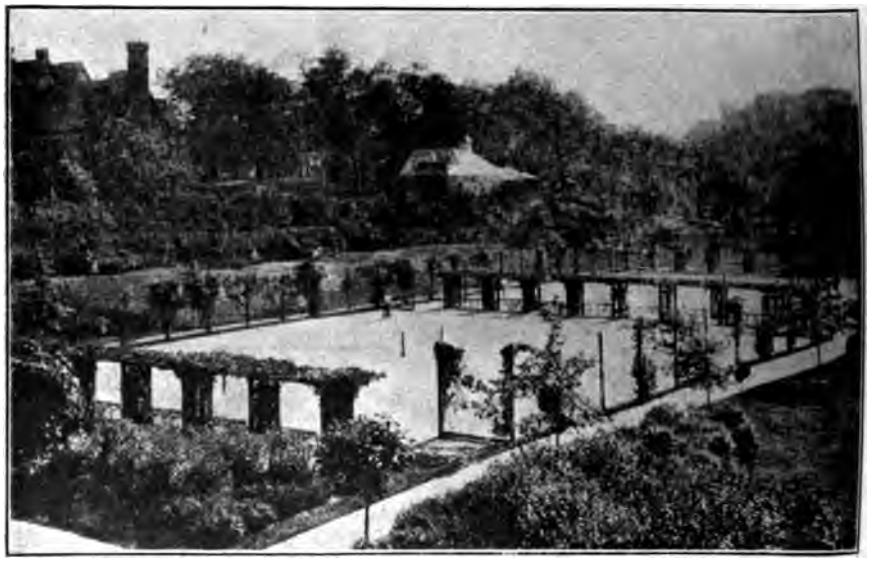
Such an anomalous condition as this seems to me to illustrate very forcibly what loss of proper play facilities will lead to; and such experiences should urge us to strive more strenuously for practical relief. This lack of play-initiative on the part of city children has been noticed in connection with practically all of the municipal playgrounds thus far established. On this point the Committee on Permanent Vacation

This is what California children should have. Large playgrounds, so that they can run and play real games out of doors, in the sun and the air. Contrast this ground with the cramped city lot, covered with huddled multitudes of repressed children.

Schools and Playgrounds for Chicago said: "Perhaps it is well to explain that one of the most noticeable characteristics of all children is the entire lack of initiative in play. It is for this reason that custodians are necessary in order to endeavor to lead them into such play as they can develop themselves, to teach them, in short, what the child of the village and the country seems to know by instinct -to depend upon himself for play, to turn to materials about him to furnish him with toys and means of amusing himself. That the children very quickly respond to suggestions was rather amusingly shown in the fact that when they were being told to bring in horseshoes to play quoits a more than sufficient number was furnished by them, and they all preferred to play with *these rather than* with regular quoits."

That children should not know how to play because they have had no opportunity to learn is more than pathetic. It is downright civic dishonor.

The ardent normal desire for fun of a wholesome sort is an unfailing symptom of vitality. Individuals as well as nations are in danger of decadence when they stifle and starve this inborn and essential yearning. As a counteracting or corrective impulse to the urgent sort of life Americans are gradually fastening upon themselves, there should be developed in our boys a permanent craving for healthful outdoor exercises; and for the older ones there should be preached the gospel of



Recreation terms courts at Hartford, Connecticut. A suggestion for large schools in California.

fun. In our intense desire for the education of our children we are likely to forget that our chief duty consists in furnishing natural and wholesome opportunities and then of keeping out of the way. We are in these latter days in danger of giving too much theoretical and manufactured direction.

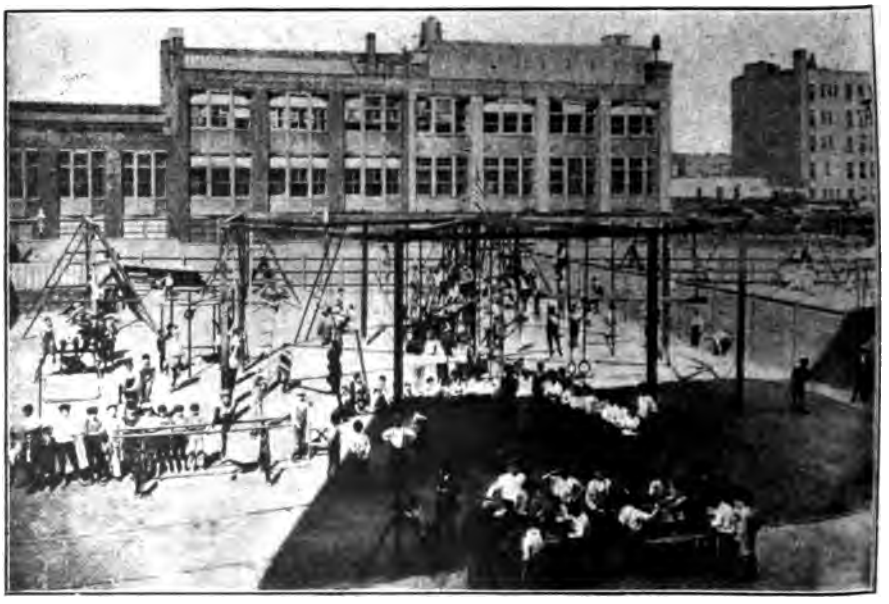
It seems to be a very difficult matter to get parents to realize how important to the comfort, pleasure, and welfare of the children are large and well-situated school grounds. They can readily see that cattle and horses will not thrive and remain healthy when kept in small inclosures, but somehow they do not extend the same consideration to their children. Hundreds of towns and villages, and even many larger cities, could have large school grounds well located instead of cramped quarters in the midst of noise and dust if the people could be persuaded that

the hardship that would be imposed on children in walking a longer distance to school is far less serious than that of being housed in buildings situated on small lots hemmed in by other buildings and immersed in foul air, much dust, and the din of the hurrying multitudes. The small children in the primary classes could be accommodated closer in with some show of reason, but those in the intermediate classes and high schools would be almost invariably better and more rationally cared for, even at the expense of a long walk, if upon arrival at the schoolhouse they had before them a day's work uninterrupted by outside life, and a purer atmosphere from every point of view.

An outdoor gymnasium in Chicago. Under the clear skies of California a gymnasium is better outdoors than in. Make it strong and rough, so that the elements nor hard usage can seriously damage it. It is good to have such things as this in a sheltered space on a school ground, where the children can climb and jump and swing. It gives them more courage and strength, deeper lungs, better muscles. Observe the poor physical condition of the boys in the front row above. Whose fault is it?

In addition to the physical well-being resulting from open-air sports, it must never be forgotten that the playground furnishes a most proficient exercise for that sense of justice, fair play, and unselfishness absolutely necessary in any worthy character. It is my observation that there is here afforded a very considerable part of that drill in democratic ways of thinking and acting essential to the proper training of every American boy. Class distinctions on the playground grow out of cleverness and courage, not the financial or social standing of a boy's

father. There the guiding spirit is he who inspires fair play and succeeds best under the limitations thus agreed upon. Then, too, "team work" is vital in this country, and those who participate in the prevailing games at school are early impressed with the fact that if a team is to be successful there must be coöperation and unified action. Here, as elsewhere, unequal endowments and skill lead to inequality of power; but perhaps under no other condition do boys of the same age meet on more common ground than they do when physical prowess and endurance represent the talents in question. Those boys who are mentally handicapped, or those who have been deprived of the proper early advantages, and consequently make an inferior showing in their studies, on the playground have a more equal opportunity to shine before their fellows and win that stimulating recognition which brings



Here [illegible] gymnasium in the city of New York. What [illegible] such as [illegible] like this would be to any large city [illegible]. How [illegible] and ability of future citizens.

a feeling of worth and higher self-respect. The leveling process here, as in all kinds of education, is not due to the degradation of those above, but to the elevation of those below.

A large and well-equipped playground with many tennis courts, handball courts, baseball diamonds, running tracks, and opportunities for all sorts of well-established field games is a necessary and a vital equipment for the natural and normal education of our children. For every thousand children ten acres of playground is not too much. No trainer of horses would be satisfied with even this relative amount of space.

You say "this is impossible in cities." Then transport all the children above the fourth grade into the country and back each day, free of charge, and see that it is made possible. One hour each day, whenever the weather permits, should be spent at play, and all children to take part as in their lesson work. Of course, I know the objection will be made immediately that this is a visionary and impossible scheme. I reply that child nature and its nurture demand nothing less, and all objections must be set over against our values of children. *No normal child has ever existed who did not crave opportunity for free play, and no child to whom it is denied will ever grow into the fullness of his normal possibility.* If Groos is right when he says "childhood is for play," then this emphasis is not only just, but vitally necessary.

The other day some high school lads of California were warned by a board of education to keep away from cigar stores and billiard halls during intermissions, for it was urged that they would certainly acquire bad habits in such places. The leader retorted by saying: "Where shall we go? You give us no playground, we are not allowed any freedom in the schoolhouse, and we are in serious need of some unhampered fun and fellowship with each other. Tell us of a better place." The school authorities felt for the first time, I think, something of the significance of this almost inhuman treatment of vigorous boyhood in our cities. If they had dared to answer honestly, they would have been obliged to say: "It is the people's fault, not yours."

I therefore insist that if you call this plan for providing larger grounds visionary and impossible you do so because you undervalue our children. Play is not simply for fun and health; it is demanded by nature as the most natural and helpful process looking toward physical and spiritual enlargement and unification.

But I am sure Mr. Barnes of Kansas hit the nail on the head when he said: "I long ago discovered that the real reason why they (school grounds) are not made more attractive is their limited area. Our people in the West, notwithstanding the low value of land, brought with them the idea that a quarter-acre or half-acre was enough land to waste (?) around a schoolhouse. Outdoor exercise is an essential part of an education. * * * In the West, where the land is cheap, we should have taken five acres for grounds (make it ten) about each schoolhouse."

We have not yet developed the habit, as have the English people, of making due provision for sports a necessary part of the equipment of even our secondary schools. And it will require much effort on the part of those who appreciate the national significance of sports to awaken the public mind to a realization of their importance. In making this assertion I am not unmindful of the great whoop-and-hurrah of modern college athletics. But it must be remembered that there are more than one hundred and fifty children in the elementary schools,

where there is one young person in college. Besides, it should not be forgotten that even in colleges usually not one student in ten takes any active and direct part in college athletics. The "rooters" are much more numerous than the runners.

It is to be feared that many of our school boards would conclude that the authorities of Eton College are poor business managers, were they to wander over the forty-acre cricket field of that famous English public school, and see the opportunity for hundreds of boys to play simultaneously. But against such a possible conclusion could be marshaled the testimony and enthusiasm of the rulers of England. Wellington's well known remark that Waterloo was won on the playing fields of Eton expresses the belief in the value of games held by most Britishers. Moreover, our school boards might get a new idea of the practical if they knew and considered the fact that, in order to get a place in this school for his boy, a father must make an application years in advance of the date when he expects his son to enter. Of course, there is no desire to make it appear that this long waiting list is due alone to the opportunities offered for athletics, but Eton's record in this particular is no small element in her great popularity. The large majority of the masters serving in the great public schools of England owe their positions to their athletic cleverness as well as to their attainments in lines of scholarship.

There was a time in the development of our country, as has been said, when almost every village and town had in immediate proximity "commons," "fields," or vacant lots where boys met, and where "three old cat," "town ball," "bull pen," and many other spunk-begetting games were engaged in; but the conditions have changed, until in most of our cities nothing remains worthy of the name of a playing field.

From a study of the measurements made by the principals of the various schools of San Francisco, as they existed before the fire, I have found that the average amount of playground furnished per child in that city was 17.3 square feet. This means that if all united into one common ground, and all of the children had attempted to play on it at the same time, they would each have had less room than all authorities agree should be furnished per pupil *inside a schoolroom*. A closer study of the data thus secured reveals the fact that 91 per cent of all the children then in the San Francisco schools had access to playgrounds, which, if combined, would have allowed but 14.5 square feet of space to each child. The same degree of crowding in a schoolroom 24 by 32 would allow an average attendance of fifty-three children; a condition which ought not to be tolerated in any intelligent community. The last statements are made possible by reason of the fact that large schools in the most populous districts had less space to devote to play-

grounds than the smaller outlying schools. There was here then not only the suggestion of continued encroachment, but also the plain truth that those children who have the least opportunity for outdoor sports at home are also those who are denied it most effectually at school. The figures given, while actually stating the average allowance of space to each pupil, exaggerated the usefulness of such grounds; for the measurements included not only the playgrounds proper, but all of the space in the school lots outside of the buildings. It must be held in mind, therefore, that a considerable amount of this space represented narrow passageways and unused corners where children can not play with any degree of earnestness. These facts concerning conditions as they existed in San Francisco have been presented not for the purpose of finding fault, but for the sake of illustration. It is my impression that San Francisco was better off in this particular than most cities of her class in our country. And, although she made a very sorry showing before the fire, the immediate future will probably see worse conditions.

Recently the writer tried his best to join unreservedly into the sports of some school boys who were eagerly trying to have fun in a school lot of the prevailing size; but he soon found his attention so distracted with balls flying in all directions and often in such close proximity to his head that he could not develop enough interest in his part of the game to do it with any zest. And he noticed that most of the boys played in a guarded way. The fact is, had they allowed themselves any sort of abandon, neighboring windows and many small boys would have suffered, and then the teachers would have stopped the game.

For the most part, these boys were unconscious of what they were missing, for they had never had room to let themselves out. The street or some unwholesome alleyway had furnished them their only playground, and consequently their play had never been free, easy, and complete. At many schools nowadays, the boys are permitted to use in the school grounds no other ball than the soft gas ones originally made for the nursery. Neither are they allowed the use of a bat with which to strike the ball, but must content themselves by striking it with their half-closed hands. Not long since I watched a game of baseball played in this way, and, during my observation, the ball was not handed (I was about to say batted) at any time more than forty feet from the striker, despite the fact that many supposedly vigorous hits were made. As I looked on, I could not help wondering how much more those boys would love their school, and how much greater would be their sense of personal power, could they be allowed to scatter out properly on a level turf, and with a shapely ash club do their unhindered best to knock the very cover off a real boy's ball.

I venture to say that no normal boy can ever reach his highest and most fortunate development whose life is denied the invigorating stim-

ulus and corrective guidance of the playing fields and the associations of his fellow playmates. Parents and teachers need to look upon play as nature's exalted method of preparing body and soul to enter upon the sterner duties of life without fear, but with faith and eagerness. All this football and baseball and tennis and cricket and hunting, so dear to the hearts of our youth, are unmistakable blessings, and the only sorrow to me about it all is that we are too neglectful of the great majority, and put too much stress on the overtraining of a few. Have you heard that digging in the garden is better exercise for youth than tennis or football? Then know that such a statement emanates from one who has lost the joy of youth, and whose wisdom is thereby limited to a partial view of life as it really exists. All good things can be endangered by intemperance. But we are told that "wisdom resteth in the heart of him who hath understanding." No one can understand a boy and direct him wisely who forgets what fun is, or who would make this world all over to toil and serious demeanor.

The heartful and vigorous development of the basal and fundamental motor power is of great value to the future health of our young people, and there is nothing that will give us poise and steadiness of control if back of it all there are flabby, undeveloped muscles, and the hearts of weaklings. You can not cure children of the fidgets or give them a safe and sane grip on themselves unless you base your training on the strength and steadiness which comes from the proper development of the body.

It is but a reasonable service for us to make better provisions for our children's education than we received at the hands of our fathers. Anything short of this would be a necessary failure. A community dominated with any other notion will in the long run prove an unsafe dwelling place. If, as Mr. Carnegie has said, "an honest day's work well performed, is not a bad sort of prayer," then wholesome and life-giving recreation after toil is not a bad sort of thanksgiving.

To the Busy Man:

Have you no time to visit your school?

But you owe that to the future. You can afford to put aside such playthings as stores, factories, and farms for a day to go and assure yourself that a more important matter—the training of the children of your neighborhood—is in good condition. Indifference on the part of the people makes for a slovenly, neglected school.

TO IMPROVE THE NEIGHBORHOOD SCHOOL.

By Edward Hyatt.

Every working superintendent knows a dozen schools or more where the growing children of the neighborhood are *steeped* in slovenliness, filth, and immorality during a large part of their waking hours.

Now *there's* a dragon worth our fighting—slovenliness, filth, and immorality are foes to progress, to civilization. Do they seem like strong words to apply to our beloved schools?

But look! Can't you put your finger on a schoolhouse that is a *fright,* unpainted, desolate, a blot on the landscape, fences smashed, windows broken, stove-pipe wabbly? Well, that's *slovenliness,* and it's bad because it tends to make the men of the future satisfied with such conditions.

And look! Don't you know schoolhouses in your bailiwick where the transoms are whiskered with cobwebs, the windows plastered with fly-specks? Where the floors have not been scrubbed for a year, the woodwork not washed for five years, the desks cleaned and varnished, never? That's *filth,* and it's bad because it tends to make slatterns and poor housekeepers of the girls who breathe that atmosphere.

And look once more! Don't you know some school water-closet that you are ashamed to enter? Where the floors are wet and filthy, the air pollution, the walls putrid with every obscene device that can be made with knife and pencil and chalk? That's *immorality.* It's bad, bad for the modesty and the morals of the little children who must frequent them.

Would you dismiss all this with a shrug, as something hallowed by time and endeared by tradition as a necessary feature of the American rural school?

But it *isn't* a necessary feature. People don't want their children raised in such conditions. They will support the man who gets out and bangs away earnestly at the solar plexus of this dragon. A superintendent can do the world more good by going out among these actual abuses in his schools than he can by sitting at his desk writing letters. He is, or ought to be, too valuable a man to be cooped in an office. Typewriters are only worth twenty or thirty dollars a month.

To go directly to the heart of the matter, how shall a school *improve* its bad condition? Of course, when just the right man gets to be the leading trustee, and stays so for a term of years, the thing adjusts itself without any trouble to any one else. But there are not enough of "just the right men" to go around—men of intelligence and determination who have time and energy to spare for the school.

And I'm not sure, even if there were enough such men, that that would be the best solution of the difficulty. It is worth while, if we can so work around as to have the improvement come from the heart of the people of the district rather than from one man. It is not well for the people to put in a trustee and then wash their hands of the whole business. Indifference is worse than active crime. For the whole neighborhood to think about school improvement and learn about it and do some of it is far better than for one strong man to do a great deal more in a shorter time amid the indifference, or perhaps the opposition, of the others. That strong man will do a better thing, a more lasting thing, to work up public sentiment for the improvement of his

BEFORE IMPROVEMENT.

[illegible] Look at the closets! What kind of children [illegible] such a place as this?

school, to get everybody interested in it, to let everybody have a hand in it. Man is a gregarious animal—he likes to do what the others are doing—a popular enthusiasm has wonderful power in doing work and in overcoming obstacles. There is no limit to what may be accomplished by it. Moreover, when you stir up a healthy public sentiment among the people, it lasts—there is always some one among children and grown folks to insist on things being kept up to the standard, always some one who doesn't want things to drop back, always plenty of people interested and watching the school property afterward. It is accounted more skillful, more powerful, more worthy of human ingenuity, to harness the wind or the cloud or the lightning when we have great loads to lift, rather than to tug at them with our own unassisted strength. Hercules was a foolish fellow when he took the Augean stable job not

to talk it up among all his neighbors and have some help—and the stables wouldn't have been dirty so quick in future.

Well, you see my idea. Go out among the people and talk it up. Have public meetings. Send out circular letters. Get the interest and the help of the neighborhood leaders. Appoint a day for a grand Improvement Bee at the schoolhouse, to be attended and taken part in by all the people and all the children of the district.

Get a committee of the thriftiest and most energetic men of the neighborhood to see what is wrong with the grounds, to determine how to remedy it and *to* remedy it. The men and boys can bring teams and plows and scrapers and wagons—and picks and shovels, hammers and

AFTER IMPROVEMENT.

This is the same schoolhouse, but it has been born again. Who will say that these improved outward conditions will not make inward changes in the children who must frequent these grounds?

nails. Probably there will be a carpenter and a painter and a paper hanger among them. Certainly the school can afford some money to buy materials. Surely people would be at hand pleased and proud to donate trees, shrubs, flowers, seeds. What a transformation could be wrought by a dozen or a score of willing workers in a day! Fences built or straightened up, repaired, painted. Trees pruned, replaced, cultivated. Grounds graded, tennis court or croquet ground laid out. Foul outhouses torn away and replaced by new, clean, and wholesome ones. Walls papered, desks stained and varnished, ceilings calcimined. Steps repaired, hitching posts put in. A flagstaff put up and a fine flag floated to the breeze. Window panes put in, weeds chopped down, trash

gathered and burned. Not all of these in one year, perhaps, but some of them.

And similarly have a committee of the best housewives of the district, and see if they don't have some ideas about the interior of the schoolhouse that they can express with cogency and effect. They can come with their daughters and hired girls, and soap, hot water, scrubbing brushes, and brooms—and what a change in one day will come o'er the spirit of that doleful schoolroom! Cleanliness is next to godliness. It is positively criminal to allow the waking hours of childhood to be spent mid dirt, untidiness, filthy neglect.

Probably the occasion would be graced by a picnic dinner, and the

GOOD SCHOOL CONDITIONS

This is a photograph of a California school, with orderly, attentive children, tasteful surroundings, and well kept appearance. What a better atmosphere for young people to live in!

ladies would have a program, and the minister or the trustee or the editor or the solid farmer would give a talk. It could be made a great occasion for the history of the district. The people would go home pleased and proud—not to say conceited—that they had done something that should be appreciated by others. Even if they have to be argued into it, they will be delighted over it afterward. And all the people will feel a sense of proprietorship in that school afterward, and will be ready to respond to a similar occasion next year. They will watch the school and raise a row if the new closets are not cared for or the trees are killed or the new fence is allowed to get dirty. There will be a public spirit behind the trustees and teacher that will make

m more active and vigilant than before. Every year the people could et in this way. Every year they would read more, observe more, talk re about the care and adornment of school property. Every year y would add some new feature and bring the old ones up to fine dition. And what would be the natural result, sure and certain? Wouldn't that school premises be famous all over the country? Indeed would. Travelers would look at it with admiration. It would have best natural situation afforded by the district, a gentle slope overking the country round. Tall trees standing in groups around the

POOR SCHOOL CONDITIONS.

other school, with broken blackboard, ragged blinds, sagging stovepipe, general disorder. See the teacher struggling for attention, and how much attention he gets!

tside boundary, making large shaded areas for the quieter games of children and for social gathering of the neighborhood—nothing is so e as the grateful shade of big trees—it is a benediction to all who come it way. These trees are grouped to conceal unsightly things and yet let the finest and widest prospects show through. Strong benches and ts are built among the trees, and perhaps there is a swing or two. ithin the lines of trees are clumps of roses and lilacs—and probably a rden of showy annuals in full bloom, all divided off in little beds and h bed cared for by one of the children. One corner of the schoolse is sheltered by a honeysuckle or jessamine, or a moon-vine has

climbed to the gable. A neat fence or hedge or border is in front, and perhaps the entrance to the grounds is over a rustic bridge across a stream of water. Somewhere there is a shed for horses, and a long row of hitching posts and a water trough—with shade near by.

Why, this will be the center of the social life of the community—every picnic from far and near will be there—Fourth of July, Washington's Birthday, big meetings of the people will gather there—it will be the rural *park* for all to go and recreate themselves. Passers-by will say: "This must be a good neighborhood. I'd like to live here. I wonder what's the price of land?" And in the course of twenty years what would be the effect of all this on the people? Would it not have a strong tendency to improve the *homes* of the neighborhood? Would not a superior lot of young folks be growing up and passing out into the community? Would not these young people go away to distant lands and leaven many a sodden lump?

Could not a good teacher do better work with children in such surroundings as these, rather than mid poverty, desolation, and dirt? Would it not be a good thing from every point of view? Could any one be the worse for such an effort in the district? It could be worked up and managed in a neighborhood perhaps by a teacher or a trustee or a citizen; but the one, *par excellence,* to do it is your county superintendent. His are the fingers closest to the pulse of the schools. He can press the button in more ways than any one else. He knows the whole country, he can use the printing press, he is listened to with attention, the newspapers help him. He has a great opportunity. Why shouldn't a vigorous superintendent appoint a day for school improvement all over his county, and use all his energy, his knowledge of human nature, his friends in making it go? His official visits can be made a powerful auxiliary. A regular, formal inspection of school property with results made known to teachers, pupils, and people; little talks to schools and school officers; inquiries and comments, praise and disapproval; these things will make it go!

Oh, yes; in some districts you'd accomplish nothing, perhaps, because some chronic wet-blanket lives there, or some soured political friend teaches there. But what of that? Do you want the earth? Wouldn't it be reward enough to see even one ugly, desolate, God-forsaken school blossom out into something of grace? To see even one tight-fisted, narrow-minded community grow, willing to give its children pictures and shade trees? Well, you'll do more than that. You'll see your worst schools come up to the line as years go on, and your best ones forge ahead as models of taste and beauty. You'll see filth and indecency becoming rarer, and better ideas of architecture and landscape gardening growing up among the people. And you'll know more yourself. And the world will be a little better for your efforts.

A BEAUTIFUL SCHOOL.

The house shown in the picture is located at Sierra Madre, in Los Angeles County. It is a one-story five-room house, situated on the slope of a hill overlooking the San Gabriel Valley and with the Sierra Madre Mountains looking in at its north windows.

The five rooms are each 27 by 32 feet, inside dimensions, and form an E, with the fifth room in the middle. The five rooms open on to a

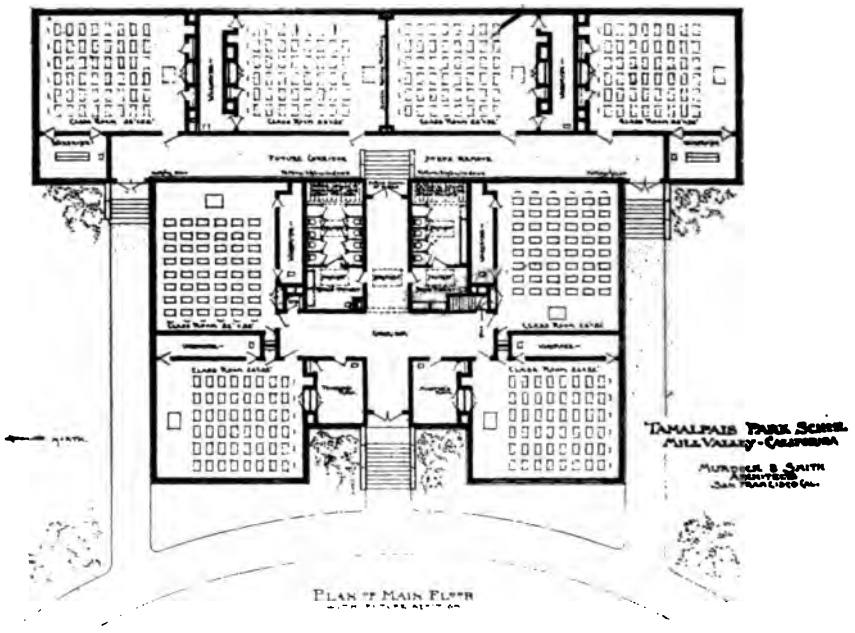
court, with a cement floor and a fountain in the center and a beamed structure overhead. The beams are being covered with growing vines and in a short time the school will pass through a court fairly well shaded by the vines. Each of the five rooms has a separateness and independence that is delightful, and yet each dismisses its children into one general assembly, thus making the yard supervision problem an easy one.

The windows are shaded by Venetian blinds. This house is considered one of the model schoolhouses of Los Angeles County.

THE BEST SCHOOL IN MARIN COUNTY.

Superintendent Jas. B. Davidson sends a picture and floor plan of the Tamalpais Park School, with the following remarks:

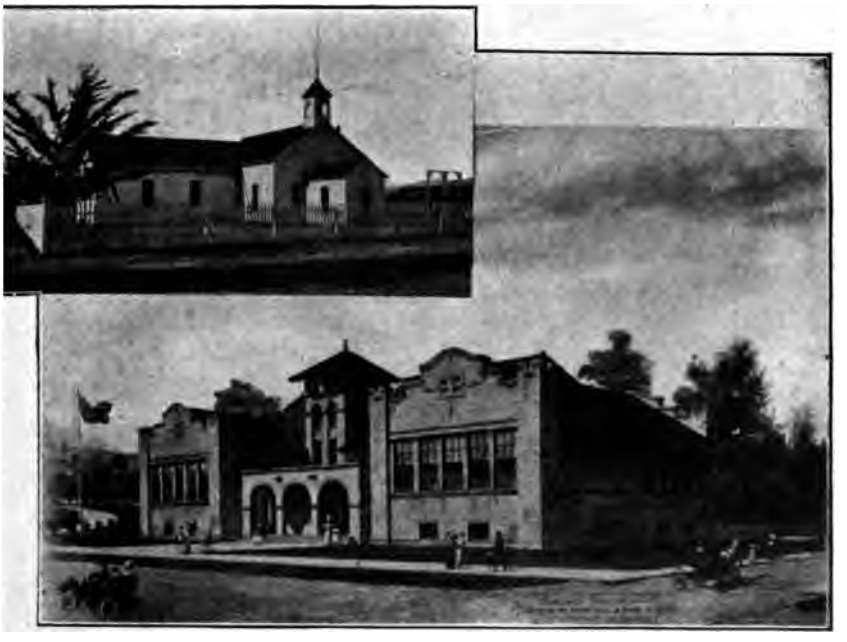
It is a good, substantial building of eight rooms. Only four of the



rooms will be built, furnished and equipped at present. The remainder will follow as soon as increase of population demands. The rooms are large, commodious and well lighted, heated and ventilated. Each room has, as part of its construction, a large wardrobe and a bookcase. The

uilding is one-story, with an eight-foot basement, hence all the rooms e on the same floor. The toilet is located on either side of the shorter ıll, opposite the teachers' rooms. It is well constructed and well ven- lated to the roof and the untrammeled air beyond. It will be, when mpleted, the best building in the county in point of convenience and ndition affecting the well-being of its inmates.

MONTEREY COUNTY.



Superintendent Duncan Stirling sends this picture of the Old and e New ideas of school architecture in Soledad District. Observe the fference in the arrangement of windows and the insufficient lighting ' the old building. Note that Architect Weeks was not afraid of a ank wall in the handsome new Mission building. This book will have en printed in vain if any one who reads it ever permits a schoolhouse be built in his district with windows scattered on all four sides or en three sides of the schoolroom. A blank wall is beautiful when it necessary.

FRESNO COUNTY.

This is a picture of a school of different type—a Parental School, in the city of Fresno. It is built as a home and a detention place as well as a school. The teacher and his family live in it, and it contains one or two strong-rooms with iron barred windows in case of need. It cost about $10,000. It is provided with several acres of land for gardening and farming purposes. It would be a good plan to extend the scope of this school to include the whole county. It is a most interesting and useful enterprise—profitable, too—saves money on jails!

Fresno Parental School.

Of course this school is doing its greatest good when it is nearly or quite empty. When all its inmates have been so brought up to grade in their studies and so improved in moral attitude that they can be put into the regular classes again, conditions are ideal. But right there is where the narrow man, the unthinking man, will register his kick, raising a mighty uproar about maintaining a school when he can hardly see the pupils.

But remember that if this school saved only one boy from a criminal career, that alone would more than pay the whole cost of the building to the people!

THE KERN COUNTY HIGH SCHOOL.

This is a view of a very fine example of the modern type of school uilding—the County High School at Bakersfield, Kern County. It as sent by Superintendent R. L. Stockton. The schoolhouse is built f white sand bricks.

How different this, from the traditional schoolhouse, with tall towers nd equidistant windows.

It is better to put money into classrooms and equipment than into reat, useless towers. A schoolhouse is sometimes a monument to a rominent trustee or a boom for the town rather than a convenient, ealthful place for children to live in and to study in. Ornamental himneys, turrets, spires and minarets are a danger when built of heavy asonry.

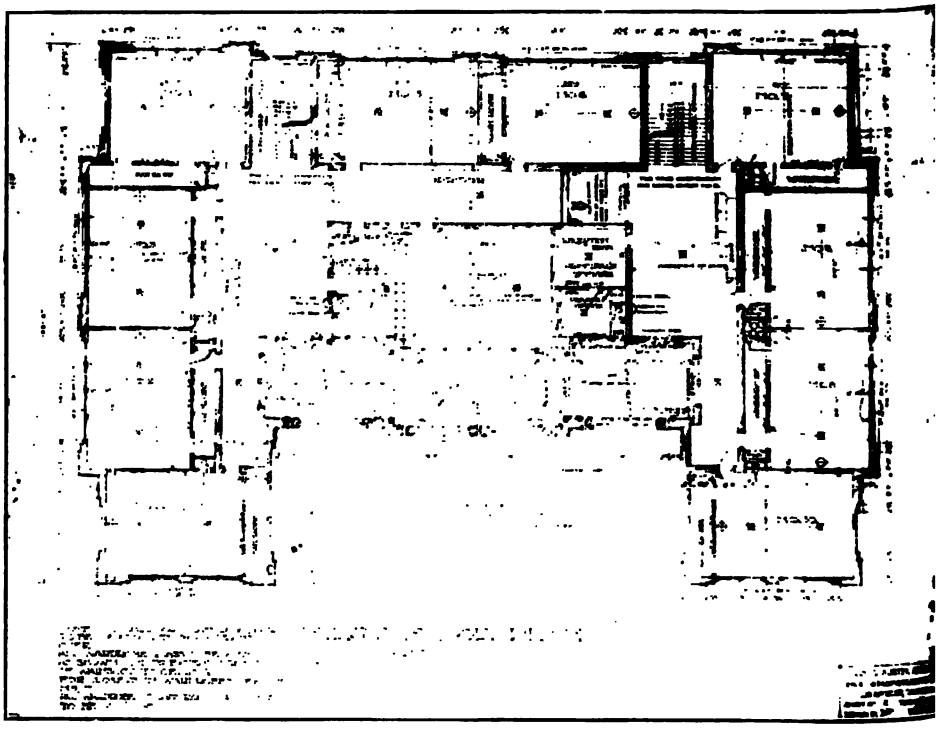
To the Janitor:

How do your school grounds look to-day? They SHOULD look as if somebody cared for them. The woodpile doesn't look prosperous when distributed all over the front yard. Sticks, weeds, old papers, tin cans, broken boxes, brickbats are not cheerful or decorative in general effect on a school ground.

A SPLENDID GRAMMAR SCHOOL IN SAN DIEGO.

Superintendent Duncan McKinnon furnishes the following pictures and descriptions of a twenty-roomed school building in San Diego.

The Board of Education of San Diego has just completed for the sum of $87,000.00 a schoolhouse, designed by John C. Austin, Los Angeles. California, that in all its appointments, in their opinion, is as near perfection as it is possible to build.



First-floor plan, San Diego Grammar School.

It is situated on a block of ground, at the corner of Twelfth and E streets. It is classical in design, the Doric order of architecture having been used. All of the walls are of either brick or concrete. The basement story is built entirely of reënforced concrete, and all of the walls above that point are faced up with pressed brick of a light cream color and artificial stone of a deep buff.

All of the stairways on the interior of the building are of reënforced concrete, the only wood that is used in connection with the stairway *being the hand* rail. The first story porch floor and the balcony on the

ond story are of reënforced concrete. The rooms containing all of machinery and heaters are absolutely fireproof, the walls and ceil-s being of reënforced concrete.

Front view, San Diego Grammar School.

Rear view, San Diego Grammar School

The building contains twenty classrooms, each classroom being 24 feet by 32 feet in the clear. There is an assembly room capable of seating seven hundred people, in addition to those that can be accommodated on the stage. On each side of the stage there is a dressing room accessible from the corridors and from the stage. There are rest rooms and teachers' rooms on first and second stories, also lavatories. In the basement (which is not really a basement, as it is three feet above the natural ground in the rear of the building and only extends into the ground two feet in the front) on the southeast corner of the building there is a large kindergarten room complete in itself, having toilet accommodations especially adapted for this branch of the school work.

In addition to the kindergarten in the basement there is a manual training room, domestic science room, separate lunch rooms for girls and boys, lavatories for girls and lavatories for boys, janitor's room, two bicycle rooms, engine and boiler rooms, fresh air rooms and fan room. All of the stalls for toilets and urinals are of selected pink Tennessee marble. The wash basins and drinking fountains are of cast iron with porcelain linings.

The blackboards are of real slate one quarter of an inch thick.

The heating is by an indirect steam system—using distillate as a fuel. The classrooms are kept at a uniform temperature of seventy degrees by an automatic heat-regulating device. The fan driven by a five-horsepower motor completely changes the air in each room every eight minutes.

DON'T FORGET THE FLAG.

Let us not forget that the laws of California require the United States flag to be displayed at every schoolhouse every day. A flagstaff in the yard is easier to manage and is better for ceremonies and public occasions than one on the top of the building. The summit of the building is a more impressive location as seen from a distance, perhaps; but the flagstaff racks the building in a gale and the roofs are often injured by people's tramping over them while adjusting the flag.

Of course, we will use common sense in complying with the statute above referred to. The law does not expect the flag to be kept out night and day, nor to be allowed to whip itself to rags in a storm. A ceremonial hoisting and lowering of the flag, intelligently and reverently done, complies with the spirit of the law better than to fly it at the beginning of the term and then never look at it again until it wears *out.*

A FIVE-ROOMED SCHOOL IN LOS ANGELES COUNTY.

From Superintendent MARK KEPPEL.

The building shown here is the Sixth Street School at Glendale. The house contains five rooms, all on one floor, and arranged for massing or separating the children when passing. Two rooms occupy each end,

ne occupies the center, and the office and library room oppose the room n the center.

The center room, which faces the north, has unilateral lighting, the ther rooms are lighted from rear and left. This five-room house is the ride of its patrons and one of the show schoolhouses of Los Angeles ounty. It is as good as the five-room house at Sierra Madre, and is f a different type.

A community should not be satisfied with a schoolhouse as good as ne homes of the district—it should be *better* than the homes, so that the omes may have an example and a model for future improvement. A ilent example exerts a wonderful influence.

A RURAL HIGH SCHOOL IN THE NORTH.

This fine building is in the midst of a lovely orange grove. Ripe fruit can be seen through the windows and fragrant blossoms perfume

the breezes that blow over the studious youngsters. Although it is a two story building, it is ingeniously arranged to avoid any long flight of stairs. It is built of stone and brick. It is the county high school at Colusa.

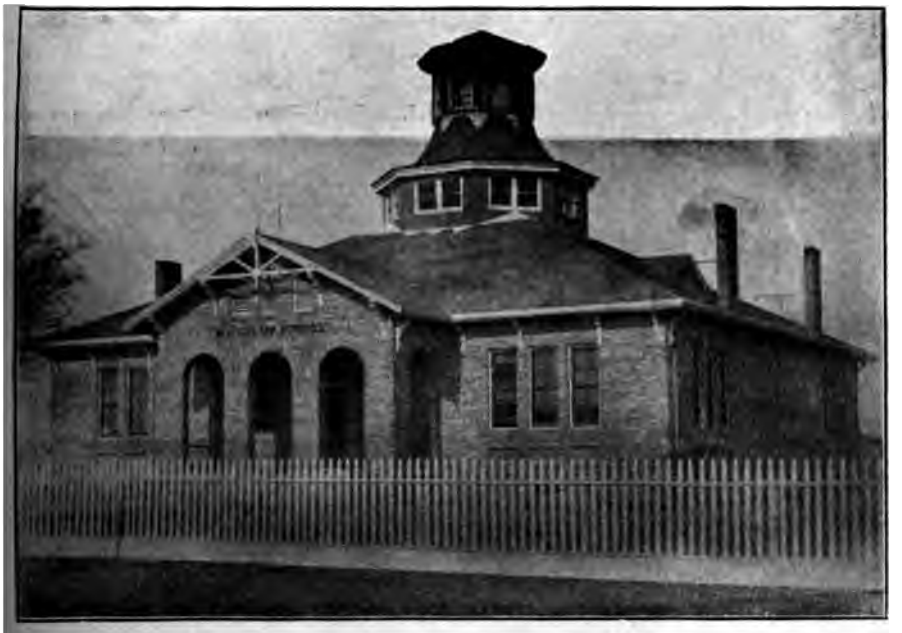
What a fine thing it is for any community to have a good building like this, with an auditorium, to use as a neighborhood center for social and educational work. It should be a common tie, to draw people together. In union there is strength.

A GOOD SCHOOL IN COLUSA COUNTY.

From County Superintendent LILLIE L. LAUGENOUR.

The Williams schoolhouse is located in a block surrounded by a fence. The entrance to the grounds is over a cement stile from which leads a cement walk to the porch.

The east side of the yard is given to the boys for their playgrounds and their baseball diamond; the west, to the girls and their basket-ball



grounds. A buggy shed and barn are in the northeast corner of the yard for the protection of the vehicles and horses used by the pupils who come from the country, and nearby is the woodshed.

In the school yard are growing walnut trees, some of which have been grafted with English walnuts; eucalyptus, umbrella, orange, and olive trees. The grounds and schoolhouse are supplied with water from a large tank filled by a windmill.

This one-story house of four recitation rooms was substituted for a two-story building with the same number of schoolrooms. The trustees, after spending some thought upon the subject, called to see the Superintendent of Schools before any definite plans had been drawn. During a discussion of several hours each one expressed himself quite freely

from his own particular view-point. This consultation ended by the trustees arranging to visit some school buildings, one of which had four recitation rooms on the same floor. After this tour of inspection, the plan was discussed again. It was finally decided to build a one-story building of brick on a cement foundation. The schoolhouse has four rooms and a hall running through the building. The floor of the hall is cement and in the center of it is an octagon court, which extends to the top of the building. In this octagon court is the library which is well lighted by the double glass doors at each end of the hall and the eight windows at the top of the octagon.

Each classroom has two entrances from the hall, one door being near the teacher's desk, the other near the rear of the room leading from a large anteroom which is fitted up as a lavatory and a place for coats and hats. There is an outside window in each anteroom. There is a large sized closet opening off of each schoolroom for the teacher's exclusive use. The windows are high and grouped so the light can come from the rear.

In addition to the doors and windows, patented ventilators are used for ventilating the building. Air-tight stoves are the only means for heating the rooms.

A TWO-ROOMED SCHOOL IN AMADOR COUNTY.

Superintendent Greenhalge sends this picture of the Oneida schoolhouse. It is built of stone, plastered on the outside, and cost $5,000. It is located on a beautiful slope covered with oaks, and is the handsomest school in the county.

TWO-ROOMED RURAL SCHOOL IN LOS ANGELES COUNTY.

From Superintendent MARK KEPPEL.

Laguna schoolhouse is a structure of two rooms, each 27 by 32 feet, nside dimensions, and has its cloakrooms at the front and its library at he rear. The two schoolrooms are separated by rolling partitions. The windows shown in the picture are those of the cloakrooms and of

he classroom in the foreground. In that room the children face toward he rear of the building and get light from the front two windows, or rom the left five windows.

The windows for the second room are arranged precisely as in the irst room, and are located at the rear and left of that room, so that the econd room has no windows in front. This arrangement seats the hildren facing the front of the second room, and when the two rooms re thrown together the sets of desks face in opposite directions. This s taken care of by screwing or bolting the desks in groups of three to trips of wood 1½ by 4 inches in thickness and width, and of the necesary length for the particular size of desks, instead of bolting the desk o the floor. It is a matter of only a few moments to rearrange the seats

in one or both rooms. The steps for the approaches to this house are made of cement and the risers are low.

If the vestibule in front had been omitted, the fact that there are two windows on one side of the entrance, at the front of the house, and not any windows on the other side would be very prominent, but as it is, that lack of symmetry is not obtrusive. This house cost less than four thousand dollars all complete, including the windmill and tank and two pavilions.

MODEL SCHOOL IN ORANGE COUNTY.

Superintendent R. P. Mitchell sends a picture of the Garden Grove School, an eight-room building costing $15,000. The grounds have since been planted and adorned.

To the School Clerk:

Are your school grounds neat and tidy, free from weeds and trash, suitably adorned by trees, well improved and well kept, so that little children will absorb lessons of thrift and care while they are young?

If not, why not?

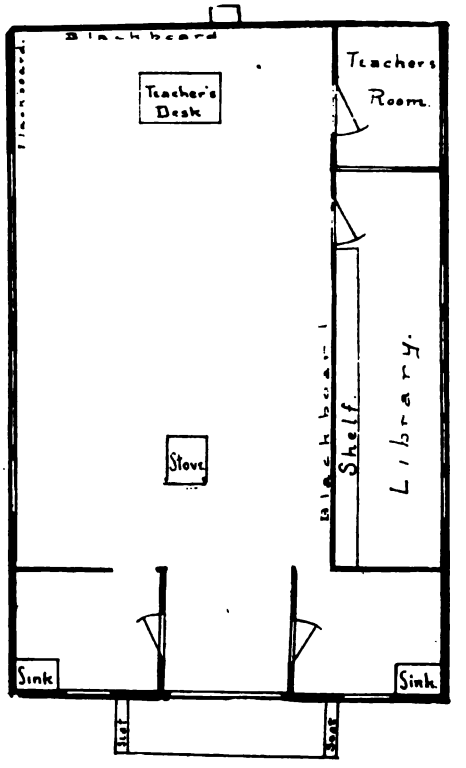
AL FOR RURAL SCHOOLS OF PLACER COUNTY.

Shane of Placer County, a practical, working superintendent, s ideas of the right kind of rural schools for a foothill region ollowing way. When a superintendent has a definite, clear-cut)f what a school ought his ideal will in time the schools of his

experience in school :ture has been mostly :he line of one-room)uses, and therefore onfine myself to these

ing.—The lighting is ix windows, 3 by 7, close together on the le of the room when , and well to the rear room. They are about 4½ feet from r. Light space is to)ace as 1 to 3 or 4 feet. Each window ur panes of glass. n roller window two to each window, the middle and one at tom.

:.—Main outer doors, opening outward. In- ors, common wooden ill to swing outward s possible.



Floor Plan Rock Springs School House, Placer County.

s.—Placed at the rear of the room, and pipe running overhead ront of room over the teacher's desk. This enables the cold air from the outside through the doors to pass over the heated part oom and thus mellows it.

lation.—Mainly through the windows and doors. Windows from the top. In some cases patent ventilators, placed at top tom of same side of room. The ones letting in the cold air as possible to the stove.

Water.—Supplied from springs, wells, and the South Yuba Ditch Company. The latter is far preferable in the lower part of the county, while in the central and northern parts the springs are best. When possible, we try to have a jet of water thrown up and have the children drink from that. Some carry individual drinking cups. Most, however, use a common drinking cup. The drainage, as a rule, in a foothill and mountainous country is a simple matter.

Closets.—Always two, and as far as possible from the schoolhouse, and if possible in among some bushes or trees for the purpose of being more secluded. Usually good deep vaults. In the Placer County High School, Auburn Grammar School and in the Lincoln School there are patent closets. Where vaults are used, they are disinfected with ashes, lime, and in some instances prepared disinfectants.

Walls.—Generally ceiled with oiled paper and painted a soft gray, yellow or light brown. The soft yellow with a tinge of green seems to be best. Ceiling from 11 feet to 14 feet in height.

Blackboards.—Slate preferable. Hyloplate, green, is giving good satisfaction. Should be low enough to accommodate the smaller children in the room. Chalk trough should be plenty big enough to keep erasers from dropping to the floor.

Cloakrooms.—To accommodate 20 children should be two at least, 6 feet by 8 feet, one for boys and one for girls. Should each have at least one window and two doors. Should be placed on each side of main entrance.

Grounds.—Get all the grounds possible. Land is cheap now. House should be set so that there is drainage all around if possible. At least there should be good natural drainage. Let the ground be long and narrow. The playground at the back, and a pleasant spot in front for the cultivation of flowers, shrubs, grass, etc. Have some natural trees when possible.

Rooms.—Should be long and not too wide. Be sure that the sun's direct rays get into the room for quite a good part of a half-day at least. Germs don't like sunlight. No raised platform for a teacher's throne. Every schoolroom should have a little private room for the teacher, that she can have for her own individual use. There should be a good big porch when possible. And when it can be afforded, a good large shed for rainy days: a shed for horses, and a woodshed.

Decoration.—This can be overdone. A few choice pictures on the wall, and some groups of small instructive ones, are far better than a thousand chromos that have neither moral nor æsthetic value. Well chosen shrubbery, boughs, flowers, bunches of long grass, etc., tastily displayed, but not overdone, will add greatly to the general appearance of any schoolroom.

SCHOOL GROUND IN MENDOCINO COUNTY.

Superintendent L. W. Babcock sends a picture of a six-roomed Ukiah rammar school set in the center of a TEN-ACRE LOT. Natural shade :ees and shrubery abound ere, oak and ıadroña; while ·ild flowers loom in wonerful variety nd profusion. 'his large playround helps ery much to ive ideal conitions to the oung people of

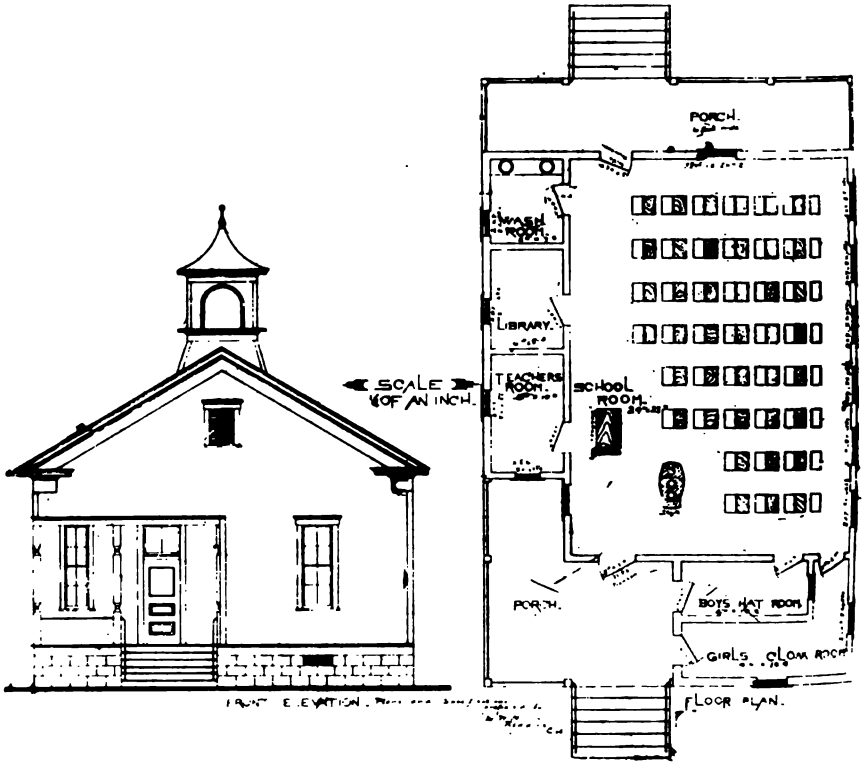
liberal and public-spirited town. Observe! Ten acres! Compare that enerous domain with the constricted, pinched, and stingy location that o many communities put up with for their schools in this land of sunhine and fresh air.

SAN BERNARDINO COUNTY.

Here is a school afar on the desert, at Needles, in San Bernardino ;ounty. It was built for the High School, together with the lower rades. It cost $21,000, is made of brown sandstone and brick, and is horoughly up-to-date in its equipment.

RURAL SCHOOL IN SHASTA COUNTY.

The Superintendent of Shasta County is Lulu E. White. She regards the Lone Pine School as the ideal rural building, and sends the archi-



tect's sketch of it. It was built in 1908 at a cost of $2,300. The furniture cost $700 additional.

A CLEARING HOUSE.

The office of the county superintendent of schools should be a clearing house for good ideas about school buildings and school grounds. There should be a table there, covered with plans, drawings, and photographs. When trustees think of building, they should go and talk the thing all over with the superintendent at length. They should find in his office photographs showing what other schools are doing and what is possible to be done. They should find sample plans and specifications. They should find out who are the reliable architects and contractors of the county. They should get sound notions of heating, lighting, ventilating a schoolroom. Of course, all this entails some work, some alertness, some responsibility on the superintendent; but that is *fairly* a part of his job.

IMPROVEMENT UNDER DIFFICULTIES.

The Dunbar School, in Sonoma County, is perched on top of a steep, bare, and rocky hill. At the base of the hill flows a nice stream, with beautiful trees along its course. One picture shows the "Water Line"—the children of the school carrying water for the shrubs and plants that grow with difficulty in the stony soil of the schoolyard. The other shows a flower bed among the rocks, that has been made possible by the labors of the water line. These pictures are sent by Miss Novilla Davidson, the enthusiastic teacher of the school. The moral of this is that where there's a will there's always a way.

The water line.

The teacher who can undertake and carry out such an enterprise with her school—something requiring real work and lasting a long time — teaches a very valuable lesson. It is genuine experience. It requires the highest gifts of leadership. In some such way as this a great teacher gets a deep hold on his pupils, teaches them morals and manners and real religion, affects their characters for all time.

Result from water line.

No teacher can do this kind of work by staying only a single year in the school. A good teacher's influence is not an annual plant. It

requires several years to bloom. When trustees find just the right teacher they can afford to pay any sum necessary to keep her. When a teacher really wishes to serve a community well, she should stay long enough to see the results of her work.

SONOMA COUNTY SCHOOL.

What an artistic picture, this beautiful California school, in its setting of natural trees! It is the Windsor School, in Sonoma County, and has just been completed. It has three rooms, and cost $9,000. Its

Windsor three-room school.

exterior is shingled. The grounds are adorned by fourteen splendid oak trees. Not one of them should ever be disturbed. A big tree should never be destroyed because it is "in the way" of some "improvement." Walks, roads, sidewalks, buildings, should give way to the trees, go around them, not through them. Trees like this lend themselves to the landscape and link themselves into the traditions of the school and the community. Here the little children have their little games; here the older ones assemble beneath the cooling shade. The building itself *could be spared* as well as the trees, almost.

JACKETING STOVES.

Every school trustee in the State of California should have an intelligent idea of the jacketing of stoves, how it is done and why it is done. There is a widespread idea nowadays that the only proper way to heat a schoolroom is by means of a furnace in the basement. Nearly every new school of more than one room, in the country, as well as the city, installs a furnace as a necessary improvement. But as I travel about the land, I find the rural school people dissatisfied with their furnaces. The rural janitor usually is no mechanic—and he can not attend to it all the time. When it gets out of order, it is difficult to have it repaired. When it is broken, there is no plumber within reach. It is expensive in its use of fuel. It does not work well in unusual weather. It is suited to city conditions, not to the country. It is a chronic nuisance.

Smith Ventilating Stove. Observe perpendicular pipe open a few inches above the floor, to draw off foul air.

Wherefore, the rural school will usually do better to pin its faith to the plain, old-fashioned stove. A well-known authority on schools said to me the other day, *"Every rural school of six rooms or under should use stoves, not furnaces."*

But these stoves should always be *jacketed*—that is, they should be surrounded by a sheet or plate of some kind, set a few inches from the stove; so that the air between the stove and jacket may be heated to make it rise and circulate through the room instead of scorching the faces of the youngsters who sit nearest.

This jacket may be a wooden frame covered with sheets of asbestos; it may be of tin or galvanized iron. It may be put around any stove, no matter what its size and shape, and may be done by a tinner, a carpenter, a blacksmith or any ordinary handy man. It is very greatly improved when a hole is cut through the floor under the stove, so as to draw in fresh air from out of doors to pass up between the stove and the jacket. This hole should be large, and should be controlled by a slide or register of some kind.

When connected with the outdoor air in this way, the jacketed stove is a ventilating as well as a heating device, bringing in fresh air, warming it, and distributing through the room. It should be balanced by providing a large outlet for foul air, at the floor level and near the stove. This foul air outlet may be a small fireplace. Or, a large pipe going into the chimney and up the chimney; thus it is surrounded and heated by the smoke from the stove, which produces an upward suction in the pipe, drawing off bad air from the room below.

Waterbury-Watertown Ventilating Stove. Observe pipes for fresh air, for foul air, and for smoke.

A number of patented devices are manufactured for schools, using the principle of the jacketed stove. The Waterbury is made at Minneapolis, Minn.; the Smith at Indianapolis, Ind.; and the Grossius is at Cincinnati, Ohio. These cost something less than $100 apiece and are apparently a very good thing. Catalogues on application. But an ordinary stove with a jacket can be made to give entirely satisfactory results. The essential features are: (1) A jacket. (2) A connection between the pure outdoor air and the inside of jacket; and (3) a vent *that will* draw off the foul air.

Outside and inside views of the Grossius Ventilating Heater.

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e proper heating and satisfactory ventilation of the school build-
ogether with ample lighting, are items of first importance in school
tecture. The ability of the teacher to manage and instruct, and of
upil to observe proper deportment and to study are influenced
ly by the temperature and purity of the air and the clearness of the
in which they must work. An English authority has estimated
good ventilation, heating and lighting will add to the capacity of
tion of pupils at least one fifth as compared with that of pupils in
fectly constructed schoolrooms. Not only are the mental capacity
e pupil and efficiency of the teacher lessened by improper heating
entilation, but the health of both is impaired, and the power to
disease is weakened by living or working in impure air or in a
erature too high or too low, while many, if not most, of the cases
fective vision are due to imperfect lighting.

HIGH SCHOOL ARCHITECTURE.

Good common sense from the pen of Professor T. L. Heaton, reprinted from the Western Journal of Education, April, 1900.

Your letter making inquiry regarding high school organization and the plan for a new building has been received, and its contents carefully considered. I send you sketches of plans and such suggestions as I think may be of value to you.

Ventilating and heating should be combined in the same system, so that warm fresh air is supplied to the rooms. If hot water or steam coils are placed in the rooms, they simply warm the air that is there already, but do not in any manner purify it. If cold air is then introduced from outside for ventilation, it must unduly chill some parts of the room before it can come in contact with the coils and be warmed Warm, fresh air may be supplied to the rooms by a warm air furnace, or by passing fresh air over hot water or steam coils in the basement. Hot, or super-heated air should never be used. Of these three methods, the warm air furnace is cheapest in the end; hot water or steam soon rusts out iron pipes. Furnace or furnaces should be of sufficient size to supply a large amount of moderately heated air. At least thirty cubic feet per minute is needed for each occupant of the room. This should enter above the blackboard from a register at least two by three feet; being lighter than the air of the room it will rise to the ceiling and disperse over the entire room, and make its exit at the foul air duct below.

There should be two fresh air shafts for each furnace. These should come from opposite directions and be supplied with "shut-off," so that the one may be used which gives the best results for the wind prevailing at the time. If there is but one duct and a strong wind is blowing into it, so great is the draught forced through the heating apparatus that cold air will be furnished to the rooms. But if there are two ducts, open the one away from the wind, a sufficient quantity of warm air will be supplied.

The difference in weight between warm air and cold air will generally give enough ventilation with such a furnace. Yet there will always be some days when direction of wind, or other causes, will interfere with air currents. For such occasions a fan (plenum system) should be used to drive the air. This fan can be run by an electric motor at small cost. It will as often be needed in warm weather as in cold. In hot weather the air in the schoolroom is about the same weight as that out-

le, so that little change will take place on account of gravity. If ere is a good breeze, ventilating will be effected by doors and windows, t on a still day the air in crowded rooms will become very impure, en with all the windows open. On such days the fan will force a aught. If the fresh air room in the basement is divided by a burlap reen, kept moist by a perforated water pipe, the air drawn through is by the fan will be cooled, moistened, and freed from dust. The oms will thus be supplied with air several degrees lower in tempera- re than that outside.

The cloakrooms need ventilating as well as warming. Damp wraps ould be dried and the odors from them carried out of the building. alls should be warmed from registers in the floor, so that children, pecially girls, may dry damp feet or clothing.

The light should be from the left of the children and from the long le of the room. If on dark days still more light is needed, it should admitted from the rear. Windows should extend as nearly as ssible to the ceiling, and window area should be one fifth the floor ace. In your climate, canvas awnings should be put on all windows cing east, south and west. They shut out the glare of the sun, but rmit windows to be opened so as to get the benefit of the breeze that ay be blowing. Inside blinds, in shutting out the glare of the sun, ut out too much light; at the same time prevent ventilation by open ndows. Windows should be supplied with translucent shades, run- ng up and down from about one third the height of the window. The ade, thus divided, permits the lower portion to be pulled down so as moderate the light for those near the window, while those sitting rther off get sufficient light from the upper portion of the window. indow shades should never be drawn past an opening of the window, the wind soon whips the shade to pieces. Translucent shades should light green. Windows are sometimes put into a building for the chitectural effect which are not ordinarily needed for lighting. Such ndows should be provided with heavy opaque shades, and draped th heavy cloth curtains, thus shutting out all the light. On a few very rk days, such windows may be needed for the lighting of the school- om. In the sketches here given the barred windows are to be so rkened.

Walls should never be pure white, but of a light shade of gray, blue, green, rough finish is better than smooth. Wood work should not be rnished, as reflection from such surface is nearly as bad on the eyes strong light from windows. School desks, also, should have a dead ish.

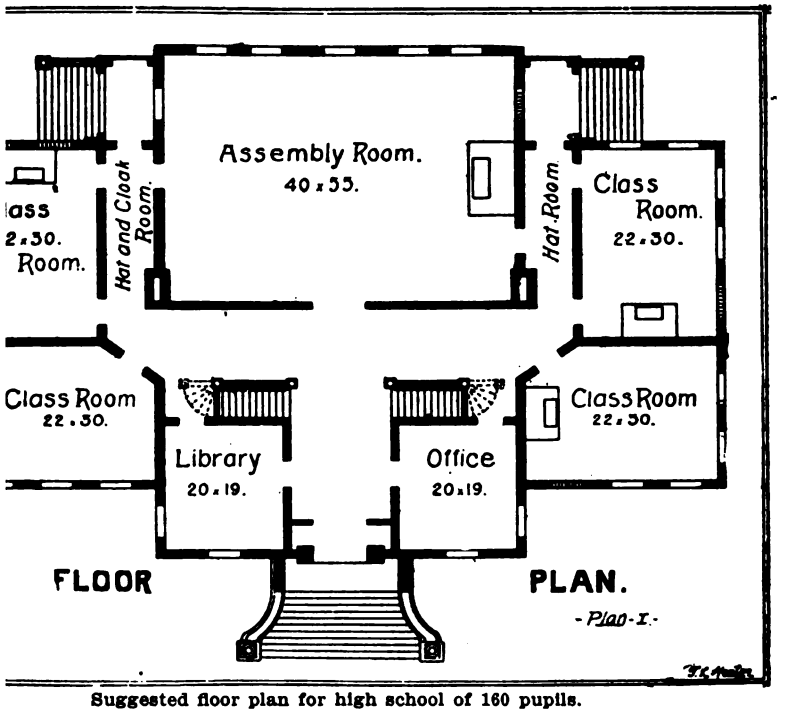
I should recommend the assembly room for a small high school. In is room each pupil has a separate desk where he keeps his books and

does his studying. From this room classes are sent out to smaller rooms for recitations. At the close of recitation they again return to the assembly room. This passing of classes gives a little relaxation and fits them for taking up the next work. If a school is arranged on the assembly room plan the classrooms may be rather small, as they are needed for recitations only. They should, however, be provided with desks, as written work is often an essential. An assembly room is particularly important in the management of the school. Here the principal may talk to all at once, arouse in them a proper pride in their school, and develop the esprit de corps, which is the most important factor in government. The morning exercises, consisting of singing, remarks by the principal, or reading of some choice selection of literature, puts the pupils in proper spirit for the day's work. All general exercises, such as lectures, rhetoricals, and debates, will be conducted in the assembly room. With a school of four or more teachers, the program may be so arranged that one will always have a vacant period to take charge of study in the assembly room. With fewer teachers some of the smaller classes will be heard in the assembly room. As far as possible, however, this room should be quiet for study. A room forty by fifty-five feet will be sufficient to seat one hundred and sixty pupils, and leave space for reference table and book shelves. Here should be kept all that portion of the library which the pupils will consult during school hours. These books are then used only under the eye of the teacher. The assembly room should be fifteen to twenty feet high and face the north, as this gives the best light for study. The windows in this room should extend to the ceiling, as the high light carries farthest. It is doubtful if an assembly room can be successfully used for study in a large high school. Such room, however, may be compactly seated and used for those occasions when it is desirable to bring the whole school together in a body.

The recitation rooms should be so placed as to consume the least time in the passing of classes. For hygienic reasons, as well as for economy of time, it is best to have the assembly room and recitation rooms on the same floor. The walls between the rooms should be so deadened as to prevent the passing of sound. There should be abundance of blackboard in the classrooms, and windows so grouped as not to waste blackboard space. Stone slate makes the best blackboards, requires no repair, improves with each year of use, will last as long as the brick wall, and costs but little more than imitations. It should have uniformly smooth surface, and be not less than three eighths of an inch in thickness.

The laboratories may be in the basement or in a small building outside, connected to the main building by a covered walk. There is per-

ss danger of fire if the chemistry laboratory is outside the main g. This danger is, however, largely removed if the laboratory nent or bitumen floor, and the gas for the laboratory is so d that it can be shut off at the close of each day's work. The danger of fire here is that the blue flame of the Bunsen burner r overlooked and a jet may be left burning, in time heating the melting off the rubber tube, and then setting fire to adjacent ork. The laboratories should be large and tables arranged the sides next the windows. The chemical laboratory should

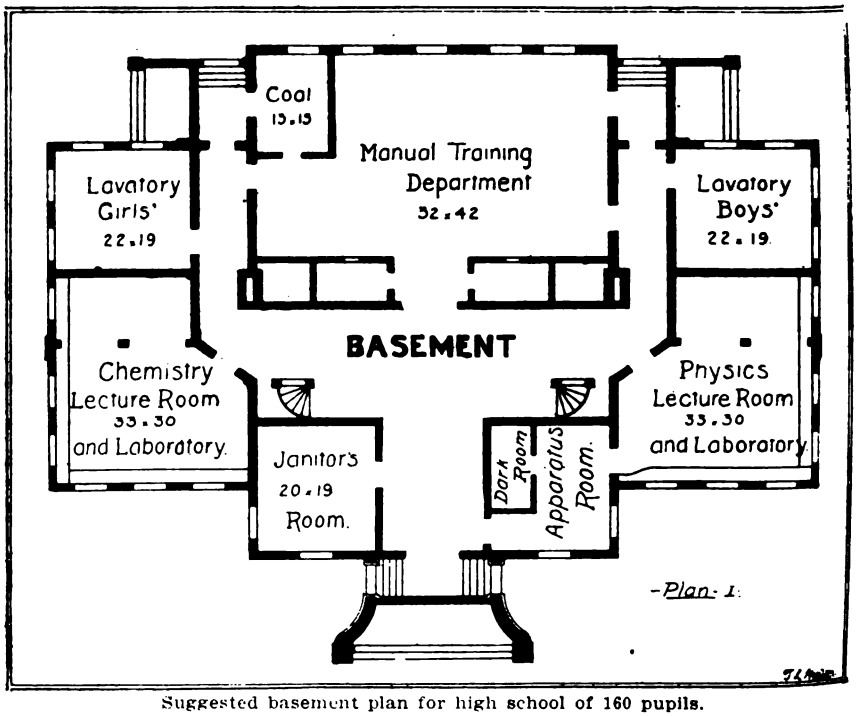


Suggested floor plan for high school of 160 pupils.

ised seats for recitation purposes, and a supply room. A dark a great convenience. Each two students should be provided ter, and a small ventilating hood. In addition there should be ventilating hood under which to perform experiments producing fumes. The physical laboratory should be supplied with water . The lecture room should have raised seats facing the teacher's ration table, and contain cases of apparatus not used in the ry. This room should have solid inside blinds, or very heavy so that it may be darkened. It should be provided with gas, nd electricity. There should be blackboards in the lecture room mical laboratory.

With good sewer system the closets may be in the basement of the building. The vault of the closet should be ventilated with a down draught, and the upper part of the vault connected with a flue containing a small heater. When there is fire in the heater, all the odors will be drawn up the flue. The vault should be made of cement, and either self-flushing, or be flushed noon and night by the janitor.

The central portion of the building being higher than the wings, will admit of two good rooms being built above the office, library and hall. The inner hall is lighted by a skylight. This building will accommodate one hundred and sixty pupils and five or six teachers. In a small high



Suggested basement plan for high school of 160 pupils.

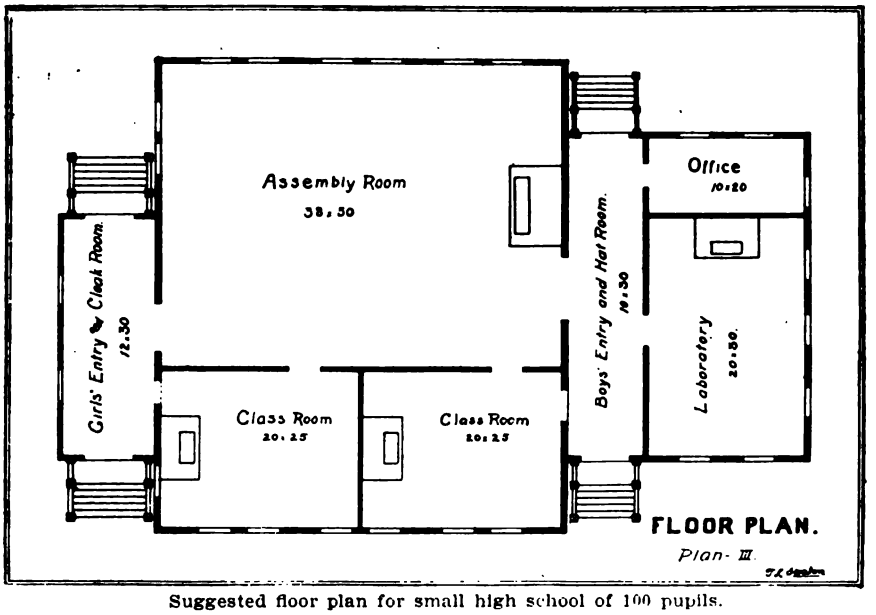
school chemistry and physics may be taught to the two upper classes alternate years. Plan II is a much smaller high school, all on one floor. There is but one laboratory, and chemistry and physics should alternate. This building may be heated by jacketed or ventilating stoves. Plan II will accommodate one hundred students and three or four teachers. An additional classroom would be secured by having a separate building for the laboratory.

In calling for plans, issue full instructions to architects, telling what size and arrangement of rooms will be required, the material for construction, the site of the building, cost, manner in which plans are to

be prepared, and all necessary information in regard to heat, light, and ventilation.

A schoolhouse should be planned from within, out; not from without,

Front elevation for high school for 160 pupils.

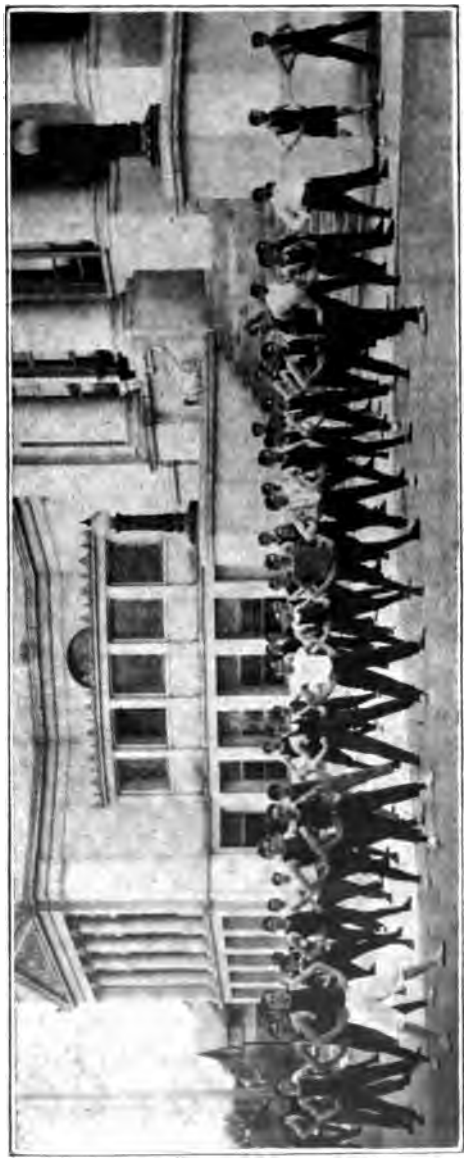


Suggested floor plan for small high school of 100 pupils.

in. Inside, the building should be arranged for school *use* and school ***hygiene***. Outside, it should please the eye by good proportions. and not offend the taste by extravagant and superfluous ornamentation.

THE OUTDOOR GYMNASIUM.

The right place for a gymnasium is out of doors. There are great possibilities in this direction in California. This picture shows a class



It is common nowadays to emphasize the value of plays and sports rather than the more formal gymnastic work. It is well to remember, however, that the exercises of the gymnasium have their place, too. Spontaneous play, for instance, does not straighten stooped shoulders, give habits of good breathing or correct particular bodily defects. Some such drills as that above are splendid things for young people. The occupations of civilized life seem all conspiring to hamper and contract the *lungs*. To dig, to study, to read, to wash dishes, to nurse babes, to keep books, to write, to do almost anything, we must droop the shoulders and shrink the chest. Unused organs grow weak and invite disease. Consumption is the disease of civilization. One in seven of us die of it. How necessary, then, for the schools to do all they can against this condition. What a valuable thing for a young person to acquire the habit of deep breathing. How important it is for every teacher to give breathing exercises and to use every other device he can that will broaden the chests, expand the lungs, increase the breathing capacity and form good habits in regard to these things.

Boys going through their exercises outside the Polytechnic High School at Los Angeles. An outdoor gymnasium does not cost much—a smooth piece of ground and some simple apparatus is all that is necessary. No physical training is so beneficial as that done outdoors.

CONSOLIDATION OF SCHOOLS AS A MEANS OF SECURING BETTER SCHOOL BUILDINGS.

An original article, prepared for this use by Prof. Ellwood P. Cubberley, of Stanford University.

Closely related to any effort to improve rural and village school architecture is the problem of the consolidation of schools in order to secure larger schools and more effective instruction and supervision. Rural school architecture is only a part of a larger problem,—that of improving the rural school itself and of improving the conditions under

Consolidated school starting for home.

which rural school work is done. The past forty years have seen wonderful changes in American education, and in these changes the rural school has been left far behind. In the cities the concentration of wealth has made it possible and the concentration of population has made it necessary that a class of schools should be developed capable of meeting greater exigencies and more advanced needs than those in the country. It has accordingly happened that the cities have provided better and more liberally for their schools. They have built larger and better school buildings, paid salaries that would draw the best teachers from the surrounding districts, developed supervision and paid liberally for it, organized high schools, provided equipment for laboratory instruction, organized kindergartens, added manual training, cooking,

drawing and nature study, and provided for the supervision of the instruction in these subjects, and done many other things which have made city schools attractive to parents who are solicitous as to the education of their children. Cities of ten to fifteen thousand inhabitants have made similar progress, and even the village has a graded school and often a high school, good teachers, a system of supervision, teaching equipment, a course of study which includes some of the special branches, and a social spirit pervading the school which is of fine quality and of the first importance in the education of children.

The country school, on the contrary, is little ahead of where it was forty years ago. In many states it has been graded, to be sure, and uniform text-books and a uniform course of study have been introduced.

School wagon made by the Delphi Wagon Works at Delphi, Indiana. These wagons cost from one to two hundred dollars.

With the better preparation of the teachers in general the quality of the country teacher has been improved. But, even in our own State, where we pay good salaries, comparatively speaking, and where we have, thanks to a wise law, probably the best rural schools in the United States,—even here we must admit that, except in a few instances, the country school is poor compared with a good town school, and this due to its numerous classes, its overburdened program, its lack of equipment, its lack of any adequate supervision, and, above all, to its isolation and to the lack of that stimulus that comes only from numbers. In most schools the average daily attendance is small, say fifteen or twenty. The children come from the same locality and have the same interests. A majority are from the same or related families. They bring no new

s to the school, there is little impulse to activity of any kind, and ›ol suffers from lack of new ideas and impulses to action. What ›ol is it is because of the teacher and in spite of its limitations. favored states the country school, lacking financial support, is in pitiable condition. No wonder parents are willing to live by ıneous day labor in a town or city rather than on the farm in ıat their children may have the advantages of a better education.

Typical one-teacher school.

Typical one-teacher school. Such schools suffer from isolation, lack of numbers, lack of enthusiasm, and lack of impulses to action.

ll probably always be true that the city will attract the ablest ıich a community produces. The prizes worth working for are :here,—are much more worthy of the energy of a man who feels himself the ability to do and to master large things. The oppor-, too, are greater for the man of ability, though the struggle tence *is much more* fierce. But, while the town and city may be

the best places for men of brains and energy, they are not the best places in which to educate the great majority of the children of a future generation of our people, and the premium ought not to be on that side, as it is now. Whatever can be done legitimately should be done to encourage people to remain in the country.

The last decade has witnessed the introduction of many new things which have tended to make country life more attractive. Rural postal

Wagon used in Springfield Township, Clark County, Ohio, for transporting children to school. Good weather dress. Route of this wagon, 6 miles; time, 1 hour 10 minutes; capacity, 28; transport, 18. The township owns the wagon, which was built for the township by the National Wagon Works, Chillicothe, Ohio. Cost for transportation, $1.66 2-3 per day.

The same wagon in stormy weather.

routes, daily rural paper routes, the general introduction of the bicycle, suburban trolley lines, lines traversing the country carrying cheap electric light and power, barbed-wire telephones, rural delivery routes of many kinds, bringing to the homes of the rural residents the products of hundreds of labor-saving machines,—these any many other things have tended to make country life more desirable and to free the farmer from much of the drudgery of life. Even a few of these comforts and conveniences have made their way into communities somewhat sparsely settled and somewhat remote from centers of civilization.

But, despite all of these changes, the little country school continues about as it used to be. An attempt has been made to enrich the course of study, but this has only increased the burdens of the teacher and decreased the time given to the individual classes. The schools have been graded and the uniform examination introduced as a test of efficiency, but this has too often served as a temptation to the teacher to neglect the younger children for the sake of the older ones.

Whenever the number of children has risen to a number sufficient to make possible the employment of two teachers the desire to have "a school close to home" has led to the division of the district into two.

The quality of the teacher has been improved, but even the best of teachers can make little progress against such tremendous odds, and the good teachers leave at the first opportunity. Under present conditions the country school realizes but a small per cent of its possibilities.

In regions where it is possible to change this condition there is no longer any excuse for failure to do so. The remedy is to concentrate a number of these small, scattered, inefficient schools into a three or four room union school, provide a good principal, good teachers, and transport the children from their homes each morning and to their homes each night, paying the expense for transportation out of the district funds. The remedy is neither new nor untried. One half of the states of the Union already have such a permissive law. In Massachusetts, Connecticut, Ohio, Indiana, Wisconsin, and Iowa the plan has been tried for some time with great success. The plan, in brief, is as follows: Two, three, four, five or more existing school districts, acting on the advice of the county superintendent, a teacher, or a group of residents, vote to unite their schools into a union school. A three or four-room schoolhouse, built on modern lines and well heated, lighted and ventilated, is erected at a central location. The old schoolhouses and sites are disposed of. Arrangements are made for the transportation of all children living at a distance. One of the teachers is usually a person of some experience, often a man, and is designated as supervising principal. Often three or four of these union schools unite in employing a superintendent, who devotes such time to each school as may seem necessary, and is paid in proportion by each union. In a number of places the stimulus to better schools has been such that the same unions which have united to employ a superintendent have united to form a union high school, thus providing higher education for all the children of the region. The result has been the perfecting of a city school system in the country, consisting of a high school, graded elementary schools, superintendent, principals, teachers, and janitors. Instead of a city school system on a small area it is a city spread out,—a city on a large scale. The graded schools of the small towns of the Santa Clara and the

San Gabriel valleys, with their well arranged and often artistic schoolhouses, their supervising principal, their graded school system, and their favorable school conditions, are types of the schools which might be formed here and there in each of the valleys of the State by the union of a number of adjoining rural schools; while the school system of that large area known as the city of Riverside, with its scattered elementary schools, its central high school, and its city superintendent, with an area to supervise almost as large as an Eastern county, is a type of what might be developed in twenty or thirty different rural districts in this State.

Of course such unions can not be formed everywhere. Schools in mountain districts, or where the roads are impassable, or where the population is very sparse, can not well be united. These will have to remain about as they are until conditions change. But in all the valleys there are certain natural concentrating centers, and what is needed is the formation of a few of these unions so that they may demonstrate their efficiency to the people of the county and to the school men of the State. The future will then take care of itself. If the present law is too cumbersome and too difficult to put into operation, which I am inclined to believe it is, then let us revise and simplify it so as to make it workable. Coöperation of communities for greater effectiveness is the central principle, and the advantages are those which come from organized coöperation. The new element which makes this coöperation possible is transportation,—the carrying of the child to the school. This is only an old idea in a new form. For sixty years we have maintained that it is the duty of the State to provide each child with the opportunity to secure an education. In doing this we have carried the school to the child. This has led to the division of districts and the multiplication of small schools and poor schoolhouses. Such schools have been found to be expensive and inefficient. We now propose to reverse the principle and carry the child to the school,—even more, to carry the child some distance to a much better school. While doing this we will save him the exhaustion of a long walk, protect his health, eliminate tardiness, increase his attendance at school, and provide him with better school facilities and a better school building in which to go to school.

Now what are some of the advantages of and objections to such a plan. The first and most important point in its favor is that such concentration means better schools. Fewer teachers will be needed, but better ones will be demanded and can be retained. The union school will be such as to offer many inducements to good teachers. With two or three grades to a room far better teaching can be done than with eight or nine. Primary children need not be neglected that older ones may be

prepared for the annual examination. Due to the larger number of pupils in each grade, there will be present in the recitation work that stimulus that comes only from numbers. Due to the large number of pupils in the school as a whole and the new interests which this larger number will bring, there will be a social spirit present on the playground and in the school which will contribute greatly to the value of the education given. Due to the presence of a number of teachers in the school there will be a professional enthusiasm which is almost unknown to the isolated country school to-day. Finally, due to the presence of the supervising principal and eventually an effective rural superintendent, there will be a close and a careful supervision of the work which will be most valuable for all.

A second advantage will be a partial equalization of opportunities and advantages as between the boy in the city and the boy in the country by bringing an approach to a well organized city school within reach of the boy on the farm. The division of labor in such a school will make possible the introduction of lines of special work which will make the instruction more suited to the needs of the country child. This, in connection with the other improvements in rural life which I have previously mentioned, will do much toward making the country a more desirable place in which to live.

A third advantage is that such a combination of schools for greater effectiveness is also cheaper, though this of course can not be made a chief argument for the union. The experience of every Eastern state has been that, in general, a better quality of education and a longer term of school, as well as transportation, can be provided at no greater expense than the aggregate cost of maintenance of a number of separate, inefficient schools. In many unions a decided saving has been effected, even after providing a better school. But let me repeat that greater efficiency, not saving in money, is the real argument for the union.

Another great advantage of the plan is the greatly increased interest taken in the school by the people of the union district. The larger and better school develops a broader and a better educational spirit. More interest is taken in the larger school, better men are selected as trustees, and the attitude of the community toward it is changed. The school becomes a matter of community pride, instead of community indifference. The testimony on this point is almost universal. The oft repeated question of how to improve the school trustee may receive a partial answer here.

In districts where the plan has not been tried it is often bitterly opposed, while districts which have given the plan a fair trial are strong in its support. In Massachusetts, Connecticut, Ohio, and Illinois the most vigorous opponents of the plan at the time of its introduction are now often among its strongest supporters.

Let us consider a few of the objections advanced. It is argued that the plan is impracticable; the experience of a dozen states disproves this. Some parents dislike to send children "so far away from home," but what difference does it make whether the distance is one mile or five miles, if the children are well cared for? The ride is objected to by some, but is it not better to take the child from his door and deliver him at the schoolhouse in the morning and return him each night, safe, protected from the wind and rain, and with dry feet and clothes, than to have him walk a mile each way and miss school whenever the weather is bad? The argument that the exercise is good for him is no argument; we all know that the country child has more than enough exercise at home. A common argument against the plan is that the removal of the little local schoolhouse causes a depreciation of farm property in the immediate neighborhood, with a corresponding increase in the value of property about the concentrating center. This is a hard argument to answer, as it appeals to local jealousy and touches the pocketbook. Once get this idea started in the community and it takes hard work to eradicate it. Experience elsewhere, though, is all on the other side. A schoolhouse on the farm does not necessarily make land valuable. What is wanted is that the opportunity of attending a good school be within easy reach of the children, and the better the school which may be attended the more it adds to the value of the farm. A good school six miles away with transportation will add more to the value of a farm than a poor school brought to within a quarter of a mile. Such, at least, is the experience of every Eastern state.

The newness of the idea is to many an objection. Many communities think and move slowly. They are those which are content with things as they are, and are willing to live and die without an effort at improvement. With many there is a certain amount of sentiment connected with the little old country schoolhouse, and they object to its removal even though they get a better one. All such people need education, and no amount of argument is so effective as a successful union in an adjoining section. In northern Ohio the first centralized schools were hard to start, and the movement began slowly; now centralization is in process throughout the entire region.

The country school problem of to-day is, How to materially increase the efficiency of the schools and develop a better school spirit in the community, without unnecessarily increasing the cost of the schools. Any increase in the efficiency of the rural schools means an increase in the desirability of the country as opposed to town or city life. For sparsely settled or mountainous districts there is as yet no remedy, but for the valley regions of our State the remedy lies in centralization and transportation. The great success of the plan elsewhere should warrant *the formation* of more such union schools in California.

A few such unions have been formed in California, but the number uld be counted on the fingers of one hand. The people seem to be raid of the idea; the apportionment of trustees has been an obstacle nen it has been proposed to unite with a town; and doubts as to the gality of such unions have been raised by some. These difficulties are irely local, are capable of remedy, and are not inherent in the plan self. which has been tried and tested. Our law probably needs revision id simplification to adapt it better to local conditions.

To illustrate the possibilities of such a union of districts I reproduce drawing and some figures made for a possible union in Riverside ounty, and published in 1903. The figures as to funds are no longer act, due to changes in the apportionment law and in the local school nsus, but the amounts are sufficiently accurate to illustrate the method calculation and to show what might be done in many places in Cali-rnia by a consolidation of properly situated groups of local schools.

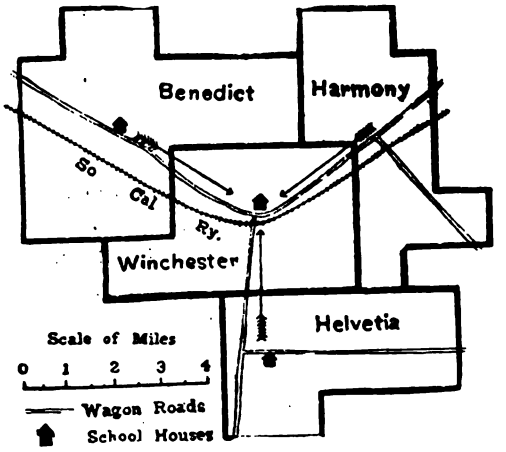
TYPE OF A POSSIBLE UNION.

This illustration shows a group of four districts suitably situated for nsolidation. The region is comparatively flat and level, and the hools are only about three miles apart. Winchester is a natural con-ntrating center. The appended table shows the financial status of the hools as they were at the time the calculation was made.

Items.	Benedict.	Winchester.	Harmony.	Helvetia.	Totals.
hool census	13	21	19	24	77
tal enrollment	11	19	23	24	77
erage daily attendance	7.5	18	14.5	16	56
ngth of term	8 mos.	8 mos.	8 mos.	8 mos.	.....
pportionment on census [1903]	$400 00	$500 00	$400 00	$500 00	$1,800 00
pportionment on average daily attendance	75 00	180 00	145 00	160 00	560 00
Total apportionment	$475 00	$680 00	$545 00	$660 00	$2,360 00
achers' salaries per month	$50 00	$55 00	$55 00	$50 00	.....
achers' salaries per year	$400 00	$440 00	$440 00	$400 00	$1,680 00
brary fund	10 00	15 00	10 00	15 00	50 00
pairs, census, fuel, etc.	65 00	50 00	95 00	161 00	371 00
Total expense for year	$475 00	$505 00	$545 00	$576 00	$2,101 00

If these four schools were to unite to form a union a great economy uld be effected. as well as a great increase in the efficiency of the school cured. The school could be managed with two teachers if confined the primary and grammar grades only, but as there is no financial ason why this need be done, it would be best to put in as a third

teacher a strong person who could act as principal of the school and teach some ninth and tenth grade work to those boys and girls who want to go farther than the grammar grades. Such a school ought to do the first year of high-school work well, sending the pupils on to the larger central high schools for further work. With three teachers, one teacher would teach the first, second and third grades; another would teach the fourth, fifth, and sixth grades; and the principal would teach all grades from the seventh up. This would permit a degree of specialization in



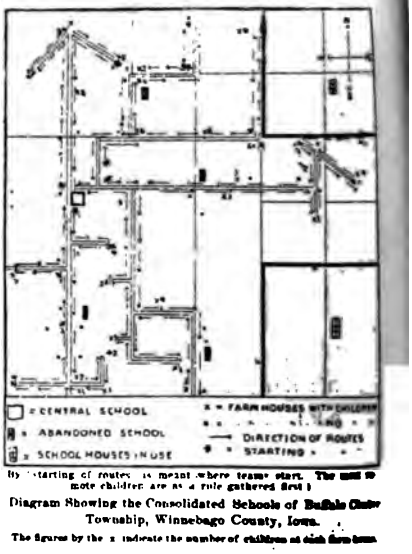


Diagram Showing the Consolidated Schools of Buffalo Center Township, Winnebago County, Iowa.

the work which would be of great benefit to all the children of the school. Instead of schools of from seven to eighteen pupils, there would be a school of about seventy, with from twenty to thirty in each room; and instead of classes of one or two there would be classes of from six to ten. The recitation periods could be made three times as long as at present, and the increased interest in school and the stimulus to action which would come from the increased numbers in the school and in each class would be an educational factor of great importance.

The better school would keep pupils in it longer than at present. At present only about two thirds of the enrollment is in average daily attendance. With a strong union school and transportation of pupils the average daily attendance ought to be increased from 56 to at least 70. This increase of fourteen in the average daily attendance would have meant an increase of $140 in income for the union school.

Let us now see what would be the financial aspect of such a union:

INCOME.

Total apportionment [1903]		$2,360 00
Increase for 14 in average daily attendance		140 00
Total income after consolidation		$2,500 00

EXPENSE.

One principal at $70.00 for 8 months	$560 00	
Two teachers at $55.00 for 8 months	880 00	
Library fund as at present	50 00	
Repairs, census, fuel, etc.	210 00	
Total expense of maintenance		$1,700 00
Left for transportation of pupils		$800 00

Four o'clock at a consolidated school.

After maintaining a far better school, with better-paid teache better teaching, better supervision, with the first year of high-sch instruction provided for free, there still remains $800 to provide for t transportation of the children. Three different routes would required. Judging by prices paid elsewhere, this ought to be sufficie though transportation is likely to cost more the first year than ev afterward. The distances are short, and the maximum number to transported would 11, 23, and 24—a total of 58 if all enrolled attend Considering the short distance, the good roads and the dry climate, ought to be possible to get each route contracted for at a rate of $3(month; this would be a total of $720 for the year for the three rout This would leave a net surplus of $80 for other purposes.

These four districts are types of many other possible unions which might be formed in this State, with great gain in the quality and quantity of the education provided for the children of these favorably situated districts, and with no additional expense to the taxpayers of the districts.

The improvement in school architecture that would result would be no small advantage of the plan. In place of the usual wooden box, a good, modern, well-planned schoolhouse would be found at the central point, and the provision of such a schoolhouse would be an important element in the education of our children.

SAMPLE CONTRACT FOR THE TRANSPORTATION OF PUPILS.

The following sample contract, bond, and rules for transporting pupils in an Ohio consolidated school will perhaps be of interest, since our law now authorizes transportation.

THIS AGREEMENT made by and between the Board of Trustees of..... ....., party of the first part, and ...., party of the second part.

WITNESSETH, That said party of the second part agrees to transport the pupils to and from district hereinafter specified, for the full school year, in accordance with the specifications which form a part of this contract for the sum of $..... payable bi-monthly, which sum said party of the first part agrees to pay for services well and truly rendered in accordance with the specifications of this contract.

SPECIFICATIONS.

1. Said party of the second part agrees to transport all pupils of ..... district ..... to .....

2. To furnish a good covered spring wagon or vehicle which can be closed or open at sides and end as the weather requires, and with sufficient seating capacity to accommodate the pupils of said district without crowding. Conveyance to be acceptable to the Board of Trustees.

3. To furnish the necessary robes or blankets to keep the children comfortable, and, in very cold weather, shall provide an oil stove or soapstones to heat the interior of the vehicle.

4. To provide a good team of horses to haul said vehicle and children. Said team must be gentle and not afraid of the cars, and must be driven by the contractor or a good trusty person of adult age, said team and driver to be acceptable to said Board of Trustees, and said driver shall have full control of the children while under his charge, and shall be responsible for their conduct. No profane or immoral language, quarreling or improper conduct shall be allowed in the conveyance.

5. To cause conveyance with pupils to arrive at the schoolhouse in ..... district not earlier than 8:45 A. M., nor later than 8:55 A. M. (sun time).

6. To collect pupils on the following described route: .....
.....
.....
.....

....., President of Board.
....., Clerk of Board.

BOND.

KNOW ALL MEN BY THESE PRESENTS that we, ..., as principal, and ..... and ....., as sureties, are held and firmly bound unto the Board of Trustees of ...., in the sum of one hundred dollars, for the payment *of which* we jointly and severally bind ourselves.

The condition of the above obligation is this: That the said contractor has this day entered into above contract to transport pupils from ..... to ..... Now, if the said contractor shall well and truly perform the conditions of said contract on his part to be performed, then this obligation shall be void; otherwise it shall remain in full force and virtue in law.

Bond approved this ..... day of ....., 190... A. D.

....., Clerk. ..... Surety.

....., President. ..... Surety.

RULES AND REGULATIONS.

1. All pupils shall be ready in the morning at the usual time for the hack to arrive at their respective homes or at the place of meeting, if hack does not pass their home. Drivers shall reach said homes and meeting places the same time each day and shall not be required to wait more than two minutes for pupils.

2. The first to enter the hack in the morning shall be seated in front and the others next, in the order in which they enter, and shall occupy the same places in the hack at night in order that there may be no confusion in entering and leaving the hack.

3. There shall be no profane or immoral language, quarreling or improper conduct in the hack.

4. Pupils shall not be saucy or disrespectful to the driver of the hack or those whom they may meet while riding in the hack.

5. The right of pupils to ride in the hacks is conditioned on their good behavior and the observance of the above rules and regulations, and the drivers of the hacks are hereby respectively authorized and empowered to enforce the same.

6. If any pupil persist in disobeying any of the above rules, the driver shall notify said pupil's parents or guardian of his or her conduct and the result of the same if continued, and if the same be not corrected at once the driver shall thereupon forbid such disobedient pupil the privilege of riding in the hack until such a time as the matter can be brought before the Board of Trustees.

7. A copy of these rules and regulations shall be posted in each hack and also in the several school buildings to which pupils are transported.

By order of the Board of Trustees of ..... District.

Adopted .....

Equipment for a class in cooking at the California Polytechnic School.

THE SAN JOSE HIGH SCHOOL.

From City Superintendent ALEXANDER SHERRIFFS of San Jose.

The San Jose High School is constructed on the university plan. It consists of five separate and distinct buildings so grouped and connected as to form one general whole. The Administration Building, with its massive towers, is the central feature; on either side are the Classical and Science buildings; at the rear of these are the Domestic Science and Manual Arts buildings. They are all of the same type of architecture, with rough cement plaster exteriors and red tile roofs, and are connected by three cloisters. One of these runs through the towers between the east and west entrances and is crossed by the other two,

San Jose High School.

which extend from the Classical and Science buildings to the rear end of the group. Each of these two side cloisters lead to the side entrances of the Assembly Hall in the main building. The east cloister also passes an open court around which are located the various departments of the Manual Arts Building.

In the Science Building the first floor contains the departments of Biology and Physiography, with their aquarium and bivalve troughs, herbarium cases, windows arranged with darkening curtains, and electric connections for lantern work, and metrological recording instruments, connected by cables with the weather vane on the tower, the thermometer, barometer, and rain gauge. The Chemistry and Physics departments are located on the second floor, where there is also a large science lecture hall. The demonstrator's tables in these three rooms are equipped with all the various forms of electrical energy, water, gas, and compressed and vacuum air for experimental purposes. The students' *chemistry* tables are each provided with glass closets ventilated by an

lectric fan in the attic. The laboratory also contains one large fume loset for long time experiments; a large steam still with a distilled vater reservoir, and an electrical hot plate for slow evaporation. The tudents' physics tables are supplied with gas, compressed aid and elecrical connection. In the instructor's laboratory there is an electric ransformer. The plate glass switch board in the physics department s 5 by 6 feet in size and one inch thick; and has the advantage of howing clearly all the electrical connections and apparatus and their peration.

The Manual Arts department has a room thoroughly equipped for voodworking, with benches, turning lathes, a circular saw, a band saw, a planer, and a grindstone, all operated by electric power. Another oom in this department is being equipped for arts and crafts work. The Domestic Science Department has a circular table equipped for wenty-four students, and has a kitchen, pantry, storeroom, and dining-oom atttached. The Commercial Department is equipped with the nost modern furniture suitable for this class of work.

The building has electric program clocks and telephones in each room, he latter operated by a telephone exchange. There are shower baths or both boys and girls, and a steel locker for each student. The Assembly Hall is seated with opera chairs and will hold 1,200 students.

How the whole theory of our schools is changing! Here is a class engaged in making **grape cuttings** at the California Polytechnic School in San Luis Obispo.

BUILDINGS FOR SCHOOLS.

An original article prepared for this handbook by J. W. McClymonds, the veteran City Superintendent at Oakland. The schools of Oakland under his management have taken high rank among the cities of the State. It will be of interest to every one to read his latest ideas on school buildings, after twenty years of activity in running the schools of a big California city. The article was prepared in 1909, so that it is up to date.

Modern education is more and more recognizing the value of the playground. Just how many square feet or rods should be allowed for each child is largely to be determined by the funds available and the price of the land. The cities are more in need of extensive grounds for schools than is the country. It is a wise precaution in every center of increasing population to provide extensive grounds for each school. These grounds should be selected carefully in reference to drainage and with regard to the points of the compass. The school buildings, wherever possible, should be placed on the west frontage of the grounds so as to place the playgrounds in the warm and sheltered section of the yard. This will give an eastern exposure to more classrooms, this being especially desirable in the bay region.

In selecting grounds in thickly populated districts, care should be taken that they be removed from the noise of lines of travel (noise being one of the greatest drawbacks to successful school effort), and yet the grounds must be easy of access.

Building Materials.—In my judgment only two types of buildings should be considered for school purposes—one a first-class wooden structure, the other a strictly class A building. If the buildings are to be constructed from the proceeds of the sale of bonds, the type erected should be largely determined by the date of maturity of the bond issue. That is, if the bonds are to run for forty years, class A buildings should be considered. It is not honest to posterity to construct wooden buildings with the proceeds of forty-year bonds.

The Schoolroom Unit. Whether a school building is to contain one, two, or more rooms, the classroom unit should be approximately the same in each. The length of a classroom is determined by the distance at which ordinary sized figures or writing on the blackboard may be read by the average eye. The extreme width of the room is determined by the distance that light will extend into the room. It has been found that 32 feet is the extreme length of the room, and with the ordinary height of the ceiling 12 feet 6 inches, 24 feet is the greatest width of the classroom. The best authorities agree that light should enter the schoolroom from the side at the left of the children, and as near the rear of the room as possible.

There should not be less than one square foot of glass surface for each five square feet of floor surface—the glass at the left of the pupils only being considered (for it may be necessary sometimes, for the sake of outside appearances of the building, to place the windows on two sides of the room; but the windows on the one side should always be darkened when the room is occupied by the pupils).

Schoolrooms should be grouped in a building so that the length of the room is exposed to the light.

For a room 24 by 32, the window space, exclusive of mullions, should be about 8 feet by 20 feet. The windows should be placed about 3½ feet from the floor, and should extend to within 4 or 6 inches of the ceiling. This will give a window 8 feet in length. The windows should be grouped with as narrow mullions as possible between them, and indeed the mullion should be so constructed as to throw as little shadow as possible inside the room. The glass should be perfectly clear, and should be set in large panes. The space through which the light comes should be as near the rear of the room as possible—say within 3 feet of the rear. The window space, including the mullions, will occupy about 22 feet of the length of the room, thus leaving a space of about nine feet in the front of the room without any window opening. This will give, in the front of the room where the teacher works, a restful light for the eyes of the pupils.

The window casings should be designed for the purpose of hanging window shades. Each shade should lap at least three inches on the window casings so as to prevent any light from entering when the shades are drawn. In my estimation the light is best governed by translucent shades, two, placed about one third of the way up from the bottom, being used for each window.

The wood finish of the room should be plain and so designed as to catch the least possible amount of dust. No unnecessary woodwork should be put in the room.

The chalk rail for primary pupils should be not less than 30 inches from the floor, and for grammar grade pupils not less than 36 inches.

Connected with the classroom should be a cloakroom at least 6 by 24, from which there should be a window opening to the outside. The cloakroom should not be connected directly with the corridors. Entrance to and from the cloakrooms should be made through the schoolroom. The cloakroom should be placed as far as possible back of the teacher. The exit from the schoolroom to the corridors should be made through a door 4 feet wide, this door being located as near the teacher's desk as possible. Even if it is necessary to place the cloakroom at the rear of the classroom, and it sometimes will be for the sake of exterior effect, I would insist that the exit from the schoolroom be made at or near the

front of the room. This will give the teacher better control of her class at all times.

Blackboards.—All available wall space should be covered with blackboards at least 4 feet in width, the blackboard back of the teacher's desk being at least 6 feet in width.

In large school buildings, in order to make the corridors light, the space above the blackboard in the corridor walls should be filled with prism glass. For purposes of ventilation two large transoms should be placed in this glass at each end of the room. I think it a serious mistake to place glass in any door connected with a school building.

Each schoolroom should be provided with a teacher's locker. Wherever possible, this locker should be large enough to contain a desk, and should serve as a small office for the teacher. In no case should the locker project into the schoolroom. Where a heating and ventilating apparatus is used, the air should be taken into the room at the center of the partition between the cloakroom and the schoolroom, and about eight feet from the floor. Openings, covered with iron grills, should be made in the bottom of the doors leading to the cloakroom, to allow of the free exit of foul air. The cloakroom then becomes a part of the ventilating system, the air passing from the schoolroom to the cloakroom, and through the cloakroom to the outside. Of course the exit from the cloakroom to the outside should be at the ceiling of the cloakroom.

The teacher's desk should be located in the center of the front wall of the schoolroom, or to the left of the center. Never to the right, as this would throw the light of the windows too much in the eyes of the pupils.

We have now given in detail the schoolroom. Success in planning a school building rests largely in the arrangement of these schoolroom units so as to get the best sunlight and air, and in providing in the best possible way for the incoming and outgoing of the pupils with safety and with the greatest economy of time.

The corridors of the schoolroom, especially where rooms are to be placed on either side, should be at least 14 feet wide, and should be free from obstruction.

Two stairways in different parts of the building should be provided for in two-story school buildings, and should the number of pupils housed in the upper story of any school building exceed two hundred, then an additional stairway should be provided for each additional one hundred pupils.

In my judgment the safest stairway is the one that turns on a platform at the center. The platform should be at least one and a half times the width of the stairs. Authorities somewhat disagree in reference to the width of the stairs in school buildings. Personally I am

a believer in a good wide stairway, but a stairway over 6 feet in width should have a handrail in the center. Every stairway leading from a school building should have a handrail on either side. As stairways in school buildings are for the use of children, care should be taken that no risers exceed 5½ inches. For economy in getting children in and out of the building, it is well to have at least 33⅓ per cent more stairway leading from the ground to the first story than from the first story to the second.

Doors.—All doors should open outward and should contain no glass. Each door should swing in its own frame. Locks for outside doors should be of a type that can not be locked from the inside, so that every door in the school building at all times is free for exit.

In addition to the regular classrooms for ordinary school purposes, the school building should contain rooms for manual training, rooms for kindergarten classes, an assembly room to be used by the pupils, and at times for general meetings of the neighborhood.

School buildings are now becoming the centers of neighborhood activity. Consequently, in each building there should be provision made for a room to be used for neighborhood meetings exclusively.

In many cities a public bath is considered an essential, and provision is made in the school buildings for the same.

All lavatory conveniences in school buildings are to be used by children, and should be constructed with this end in view. In many school buildings no thought has been taken of the children, these conveniences being arranged for adults.

Heating and Ventilating.—Pure air is an essential for every schoolroom. It costs something to provide pure air, but it is not nearly so expensive as it is to attempt to educate and develop children in rooms containing vitiated air. At least thirty cubic feet of air per minute should be provided for each pupil. This will necessitate the furnishing of from 1,400 to 1,600 cubic feet of air per minute for each classroom. This can be done only by the plenum system.

The cheapest method of regulating temperature is by an automatic heat regulation. There are two or three successful systems now in use. The air may be heated by steam, hot water, or by air warmers. The air warmer will be found much more economical in climates like that of California.

Plastered Walls.—The walls and ceilings of school buildings should be covered with a smooth coat of hard plaster, finished. No sand coat finish should be used in schoolrooms. The hard wall coats should be tinted to some soft color, and being hard walls, it will be possible to wash these when the next coat of tint is necessary; whereas, with the sand coat, the washing is impossible. For hygienic reasons the sand coat should be condemned.

A PRACTICAL SCHOOL.

The Arroyo Grande School, in San Luis Obispo County, has done a practical and interesting thing. The trustees have planted some fine walnut trees about the grounds, and these are now in full bearing. The windfall nuts belong to the children; but at stated intervals the trees are shaken and the resulting product is carefully cured and

Walnut trees at Arroyo Grande School

[illegible] Arroyo Grande.

[illegible] profit in this way. The [illegible] for graveling the walks.

[illegible] grounds at Merced, which were [illegible] distributed the crop each year [illegible] boxes of luscious oranges [illegible] youngsters, with earthly [illegible]

SAN JOSE GRAMMAR SCHOOLS.

The schools at San Jose are fine types of modern school architecture. They are built according to a comprehensive plan, and are all new, having been built since 1906. Trustees who have building to do will do well to take a day or two in examining these splendid buildings. It is well worth while to travel about among some of the progressive cities of California before deciding upon your own schoolhouse. This picture and its description is from City Superintendent Alexander Sherriffs.

San Jose has recently constructed four new grammar schools costing $55,000 each. The inside plan of all the buildings is practically the same, the exterior being "Mission," though representing different

Lowell School at San Jose.

Mission types. Each school has 16 classrooms besides an assembly hall seating 600, a Manual Arts room and a Domestic Science room. The teachers have a room fitted up as elaborately as is the principal's office, and is provided with a dining table, a kitchen, wardrobe, etc. The classrooms are 24 by 30 feet in dimensions, and are provided with artificial slate blackboards, and, except on the north side of the buildings, with Venetian blinds. The assembly hall and four classrooms can be darkened, and are provided with electric connections for lantern work. In the seventh and eighth grades the rooms are fitted up for the special lines of departmental work. For example, one room is fitted for dress-

ing, one for music, one for arithmetic, and so on. Each building, like the High School, is heated by hot air pumped in by fans, and each room is provided with an automatic device which keeps the temperature at 68 degrees all the time, while not diminishing the amount of air. Fire apparatus, fire escapes, and drinking fountains are also provided, and, in all, the buildings are quite suitable for school purposes.

A HOMELIKE SCHOOL.

The Bryant School.

Here is a picture of a regular, graded city school, the Bryant School in Riverside. But see what a "homey" look it has. It might be the handsome residence of a prosperous business man so far as appearance goes. None of the conventional school earmarks are visible. Notice also that blank wall; it is there because it needs to be there. The building contains four rooms and cost about $14,000. When it becomes crowded, wings will be added, separated from the main building by cloisters.

There is a danger in erecting buildings that can be readily doubled or quadrupled when the need arises; the danger of insufficient grounds and overcrowding. A generous piece of land becomes stingy and disgraceful when we put four times as many children on it.

A GENEROUS CALIFORNIA SCHOOL.

The following description of the Polytechnic Elementary School at Pasadena was written by Mr. Hunt, the architect:

"There is little that can be said about the scheme that is not obvious on the face of the plan. It is well adapted to the warm climate of California. Its picturesqueness and the flexibility of the parts making it possible to add to the school as it grows seem to be features that might be of interest to school boards having a similar problem."

This plan ought to be usable in many parts of California where a school of moderate size starts under conditions that indicate a possible future growth. You can easily see that the advantage of having sunlight in all rooms and having the entire building on the first floor is worth considering. The actual working out of the system in the school for the past two years has been a great success. When we have some money we just add another room. The broad covered porches make a place for the children to play in rainy weather, stuffy corridors are eliminated. We are having no trouble at all in heating the building, using a system of forced air. The whole thing as it stands cost less than $25,000. We figure that it cost about $1,000 per room, everything included, and no doubt could be done for less if it were simplified.

The building is in every way adapted to ideal school conditions in this climate. It is of one-story in the so-called California style. A unique feature of the arrangement is the extension of the broad cement-floored colonnade which surrounds the front or north patio entirely through the building as a sort of hall and around two sides of a patio on the south. This leaves the assembly room, which is in the center of the building surrounded on three sides by roofed out-of-door passageways upon which the classrooms open.

These broad open air passageways hum with the life of the children. They play there whenever they wish; and thus, the colonnade is the scene of much of the social life of the school.

The lines of the building are broad and simple. The interior is finished in Oregon pine; and various tones of brown provide the color scheme.

A large brick fireplace is one of the beautiful features of the assembly room, and a cheerful wood fire is kindled there on dark days.

The building contains ten classrooms in addition to the assembly room, offices, dressing rooms, janitor's room and storerooms.

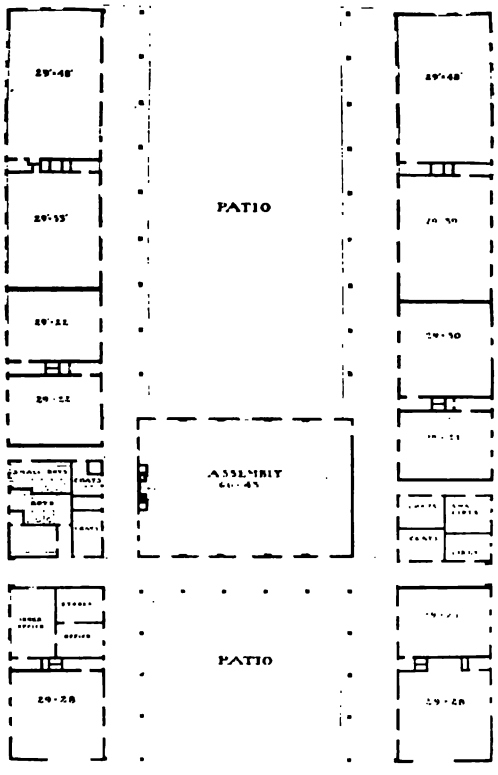
The rooms are planned to admit as much light and fresh air as possible. The windows, of which there are an unusual number, are broad, and the sunlight penetrates to every corner of the building.

Special attention is paid to the heating and ventilation of the rooms. The whole building is heated by hot air furnaces with a forced draught.

POLYTECHNIC ELEMENTARY SCHOOL AT PASADENA.

Every one should study this plan and picture of the Polytechnic Elementary School at Pasadena. It has California flavor. It is generous and wide-minded. A good conception of it can not but be helpful to any one concerned in the future building of schoolhouses. Note that it is all on one floor—there is plenty of room in California. Stairways are a barbarity. Consider the broad and comfortable porches, the lack of gingerbread, the simple appropriateness of it all. It was designed by Myron Hunt, of Hunt & Grey, school architects, Los Angeles.

nbly Room, Pasadena Elementary School. Note the fireplace, the roomy, comfortable aspect of it all.



THE OLD ONE

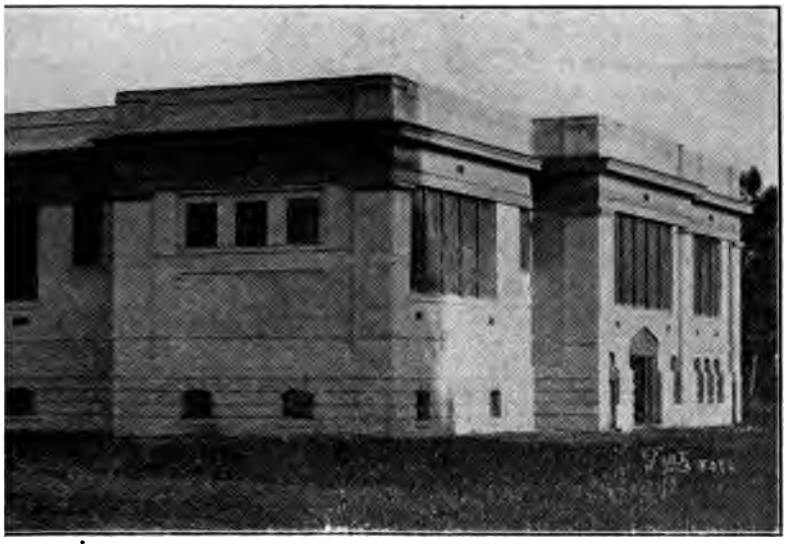
NEW SCHOOL

Nothing could better illustrate the passing of the old and the coming of the new than these two photographs of successive schoolhouses in the village of Fowler, in Fresno County. The old one was considered a splendid building when it was built, fewer than a score of years ago. But how our ideas have changed! Observe the windows in the old school, equidistant and far apart. Note the waste of materials in building a cupola—a useless appendage.

See how different in idea, in type, is the new building just completed. It cost $30,000. The architect was E. Mathewson, of Fresno.

It is in the poor, dilapidated, dust begrimed, filthy schoolrooms that the spirit of vandalism asserts itself, for there is nothing there to command the respect of the children. We believe it is as much the duty of the school to cultivate the æsthetic side of the child as it is to teach the *multiplication* table, or the single rule of three.

ID THE NEW.



FOWLER.

Old school at Fowler.

COUNTRY SCHOOLHOUSES.

An original article prepared for this manual by Henry F. Starbuck, School Architect, No. 4 McDonough Building, Oakland. Mr. Starbuck has had a long experience in building schoolhouses, both in northern and in southern California.

Perhaps no branch of school architecture has been so much neglected in California as that of the rural or country district schoolhouse. This is not surprising when one realizes the general conditions which exist in the case of such buildings, usually located at long distances from the business centers, and in many cases without convenient facilities for getting materials of suitable character to even make the building modern in detail, to say nothing of the difficulty of procuring anything ornamental, which in an ordinary neighborhood would be considered a necessary adjunct to the building. Then, too, the good citizens to whom are intrusted the care of these buildings, are generally of the busy, practical, hard working class, whose education has been along the lines of other requirements, and who are not in touch with the artistic side of life. Buildings of the class I describe are very rarely designed by an architect, or even copied from such designs, and few architects of any ability could afford to give the time and trouble to look after them, unless actuated by a philanthropic public spirit. I have often thought, as I pass through the State and see the rude and ungainly structures which have been built to supply the demand for a small and inexpensive school building, that I would gladly offer my services to assist in starting a line of buildings which should express something of an architectural idea to the young child, whose first impulse in this direction may come from the building in which he learns the rudiments of his future education. Coming, as many of these children do, from homes barren of the least suggestion of art or architecture, how full of inspiration would be a school building neat, artistic, comely, and attractive. I believe it should be the duty of those having the general charge of schools to insist on these features as not only proper, but absolutely necessary to the best interests of the children of the State. That they should be authorized to see to it that these buildings are made monuments of education, and to impress on the local school trustees that a liberal allowance for this feature is money as well and as properly invested as if spent for apparatus or school books.

What an educator for the fathers and mothers of the district would such a building be, if designed on lines both practical and architectural, for true architecture is a silent, but a persistent teacher, and never sleeps, and it is a surprising fact that a truly architectural building is an inspiration even among the uneducated.

Take the working classes of the old world; surrounded by artistic *monuments* of all kinds, as they grow to manhood they are unconsciously

educated by their surroundings, and while as citizens they do not approach our working classes in this country, as workmen they excel in all matters calling for artistic rendering or finish.

In designing the class of buildings required for the rural districts there is a great range of ideas which can be adapted. In the first place, the location should be considered. California contains within her borders every kind of climate and all kinds of country. The architect can properly use in some place every style of architecture which has appealed to the artistic sense of the student. And in the country school, where we are not likely to be handicapped by want of room, and where we may allow the fancy some play, we can design with free hand, keeping always within the line of practical common sense. And *architecture* is always common sense.

The next feature of this class of buildings to be developed is the material. All kinds of material offer themselves to the true architect. In our mountainous sections, what better or more architectural material than the stone which abounds on every hand. If the demand were created men could be found who would build such work so that it would be scarcely more expensive than ordinary wood construction. Under the direction of some intelligent master workman much of this work could be done by the people of the district, and thus a general interest be aroused which would be the beginning of better things.

In the redwood districts, what would be more truly architectural than a log cabin effect of natural logs. I can imagine the most pleasing results from this line of suggestion. In fact, it is the only real American style of architecture, and is worth developing for general reasons.

In other locations, the broad bungalow effect is suitable, and it is somewhat strange that this style has not been more generally adopted. It is peculiarly adapted to California, and is economical in construction and attractive in effect.

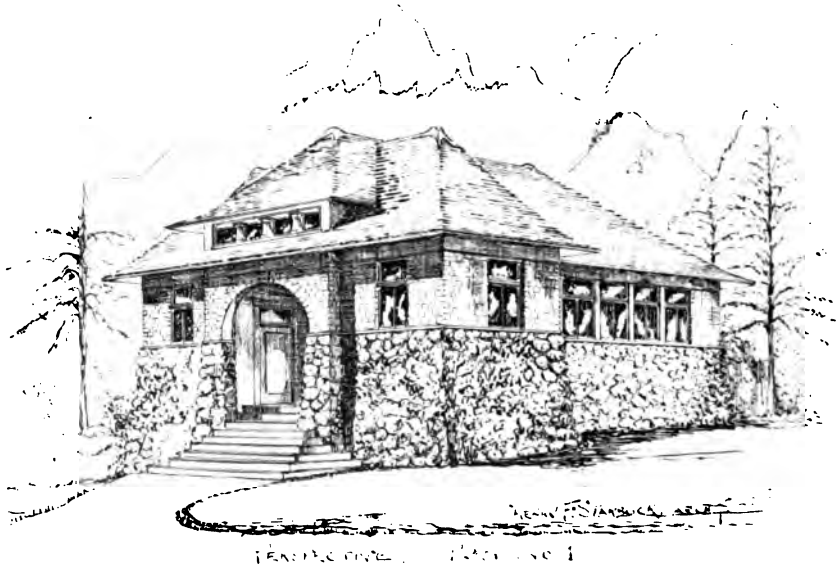
For the portions above the reach of the hands of mischievous pupils a most excellent finish for the exterior is cement plaster, on either wood or metal lath; the latter preferably in locations at a distance from the ocean. In the vicinity of the coast it is short lived, and has been known to rust out entirely in a short time.

In the matter of technical detail, the same rules should be followed as in the larger city buildings, and in this article it is not necessary to go into this fully. I am not a faddist in matters of light, heat, and ventilation, but these should be considered with careful study, having in mind the means at hand available for the purpose.

Light should be plenty, and on both left and rear, the greater amount on the side. While unilateral light is very strongly advocated by many, I do not believe it the best for the average rural school building. The location, however, may determine this to some extent, and if the amount

is sufficient it may be the best in some cases. My own observation is that the main point is to have *plenty* of light, and, of course, not in the face of the pupils.

Ventilation is a most important point, also, but in the small buildings of the outside districts it is not always possible to have anything like

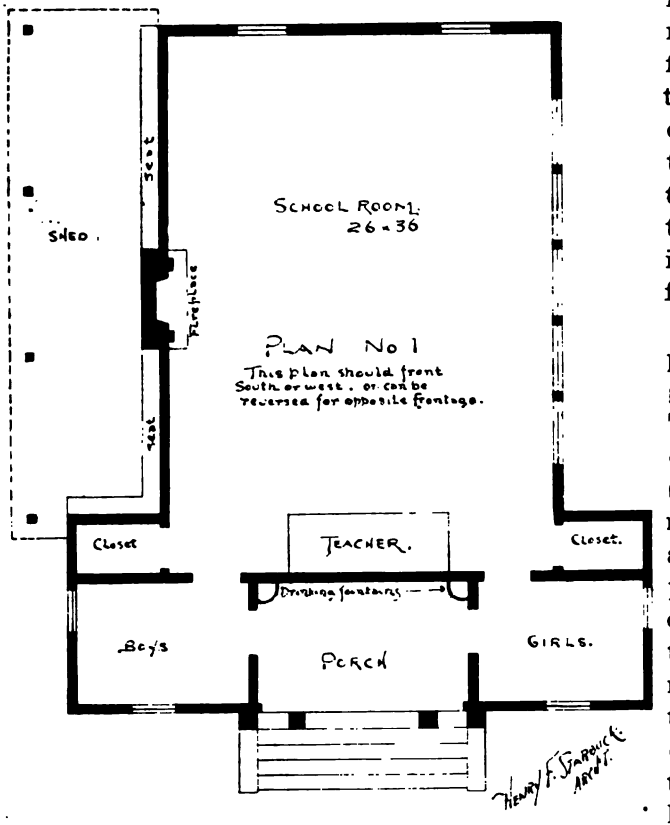


a ventilating system or apparatus, consequently the only thing to do is to make such provision as can be without too much expense.

Probably the best and simplest plan in a building of this sort is the open fire. Of course it has its objections, but in the localities where it is not too cold, the room can be well heated before the pupils assemble, and a moderate fire after school is opened will keep up the heat, and the ventilation from a good fireplace is one of the best systems known. This *may* sound heretical, but I think it can be proven. In the open country,

where the air is uncontaminated, there is nothing better than the pure outside air, and I make use of casement windows which open outward in both directions, thus enabling the air to be drawn out or injected, as the sash are opened toward the wind or opposite.

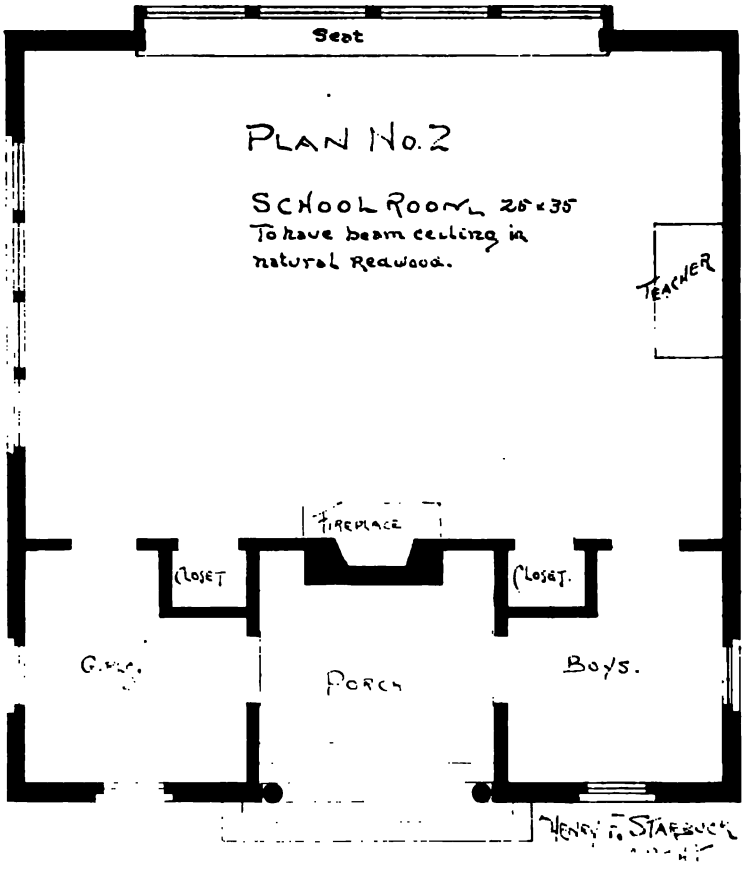
Where the cost can be afforded the best and most effective mode of heating these small buildings is a hot air furnace, which in a pit under the building can be made to heat thoroughly all the rooms, and as the heat is carried by a flow of warm air through the furnace, ventilation is also furnished by the influx of this into the room, which can be allowed to pass out by the windows, or through openings prepared for the purpose.



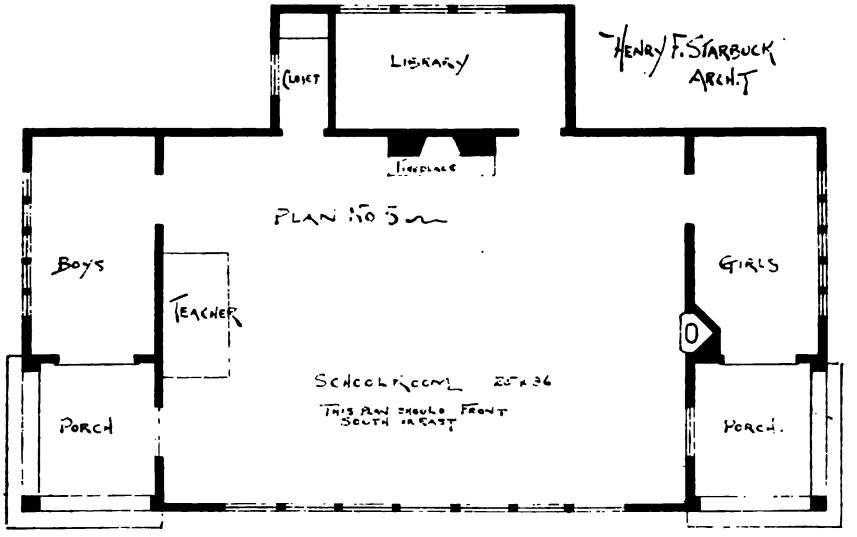
I have in this paper made suggestions only. The local conditions, the amount of money available, and the particular requirements of the case, determine many of the points under consideration and what I have laid down is open to these modifications. This applies as well to the sketches of buildings which accompany the article, and which are not intended to be perfect or complete plans, but only to form a basis for exemplifying the above ideas.

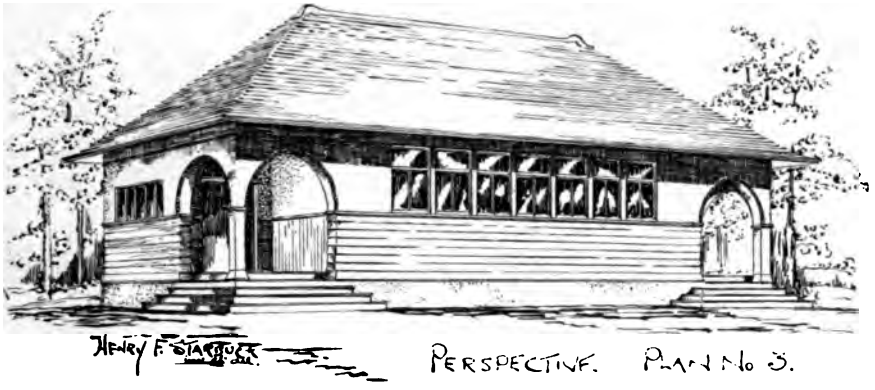
As such they will explain themselves. I have shown as one of the designs for Plan No. 1 a conventional style, which would be appropriate in a village or small town, and a rustic design in which I have introduced the local stone and shingle finish more suitable for a rougher country, and peculiarly adapted to the mountainous sections.

PERSPECTIVE. PLAN NO. 2.



Plan No. 2 shows what could be done in the redwood country, and if neatly finished in a similar style on the interior would be appropriate and artistic. I would suggest the roof to be of the local "shakes," as *adding to the* architectural effect.





Plan No. 3 is in the simple bungalow style, and is appropriate for any of the flat country of the State. The broad eaves give a sheltered effect, and are practical in the protection of the windows from the strong sunlight, and the simple lines of construction make the design one which will give the greatest value for the cost of building.

This handbook belongs to the public school. It should be catalogued and stamped as belonging to the district library, and should be kept and issued in the same way as other library books. It will be needed as a book of reference by Trustees in the future as well as by those of the present. Therefore, since it will soon be out of print and impossible to duplicate, this copy should be preserved and carried on the school records.

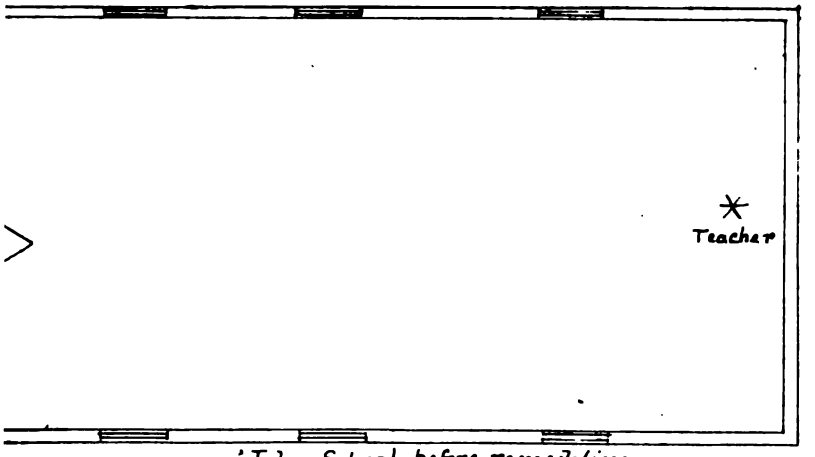
REMODELING FAULTY BUILDINGS.

Often it is possible to remodel a faulty building so as to get rid of its worst features at small expense. County Superintendent Stirling of Monterey County has been working on this problem along with Architect Weeks, and has produced some excellent results, at expenditures ranging from $200 to $600. For instance, the Jolon School, a typical rural building, has been regenerated by shifting the windows and doors.

Jolon School, remodeled. Originally it was similar to the ordinary rural type shown at the top of page 148.

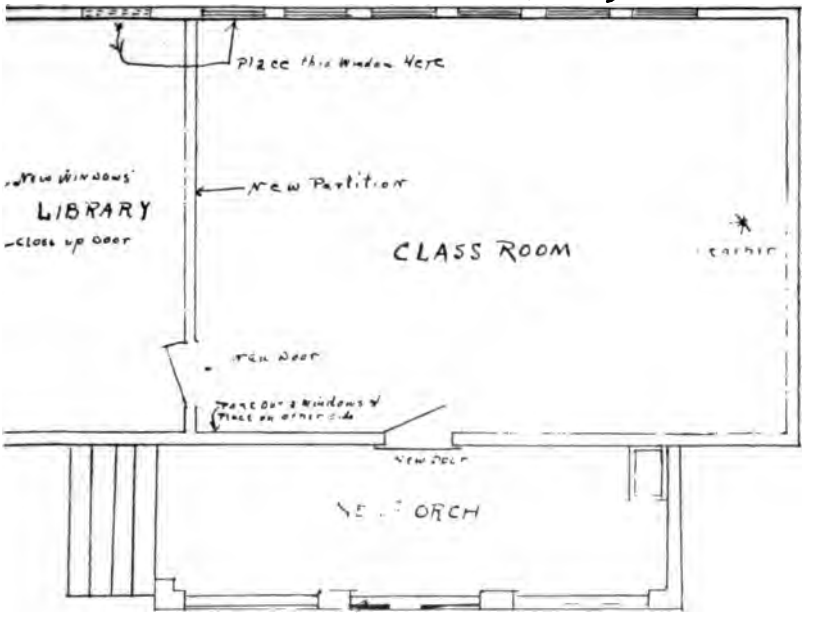
adding a partition and a good porch, into quite a smart and hygienic school. The floor plan before and after remodeling is given, and an outside view of the remodeled building. Observe particularly the improvement in the lighting, and the added comfort of the roomy porch.

Superintendent Baldwin, of San Diego County, reports that he has had good success in improving the lighting of rural schools by changing windows, at small expense.



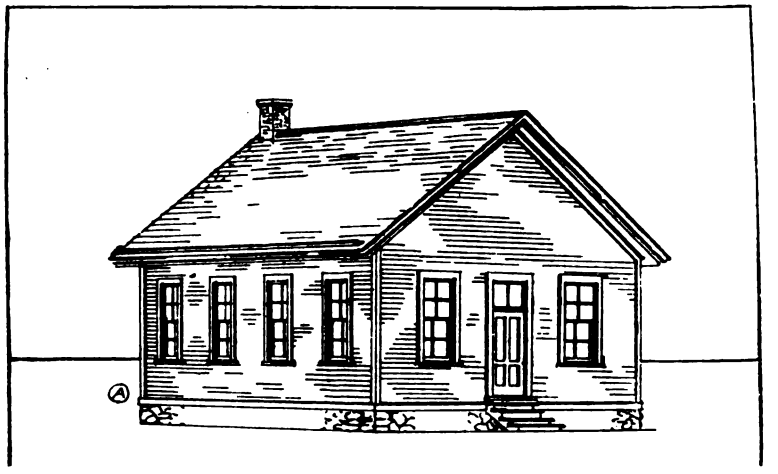
'Jolon School, before remodeling

Jolon School after remodeling

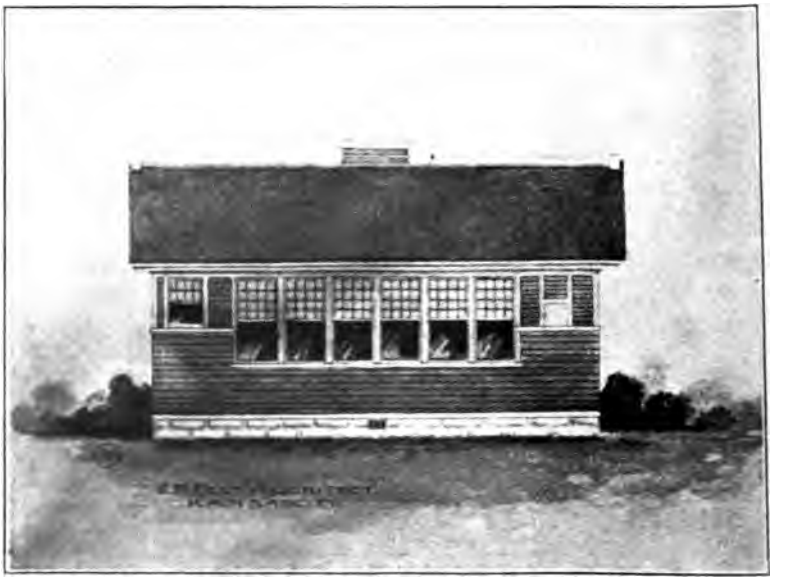


REMODELING IN MISSOURI.

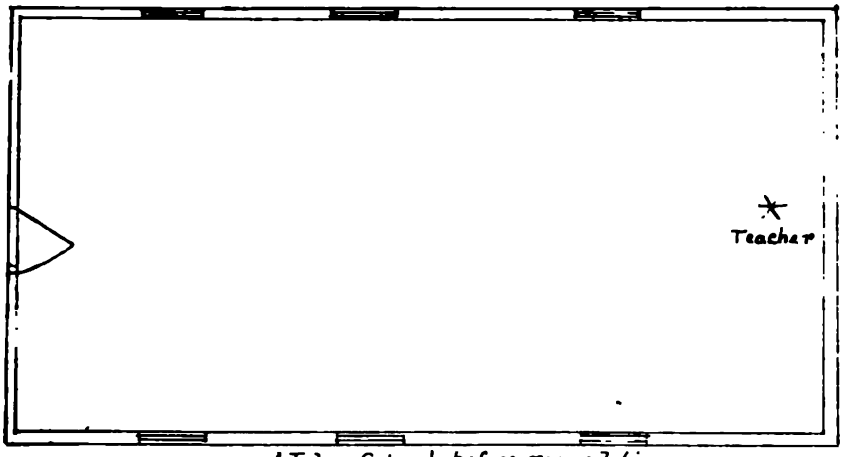
The following pictures and plans are from a pamphlet on school building issued by Superintendent Gass of Missouri.



Picture of the ordinary schoolhouse of the older type—windows all around at regular intervals.

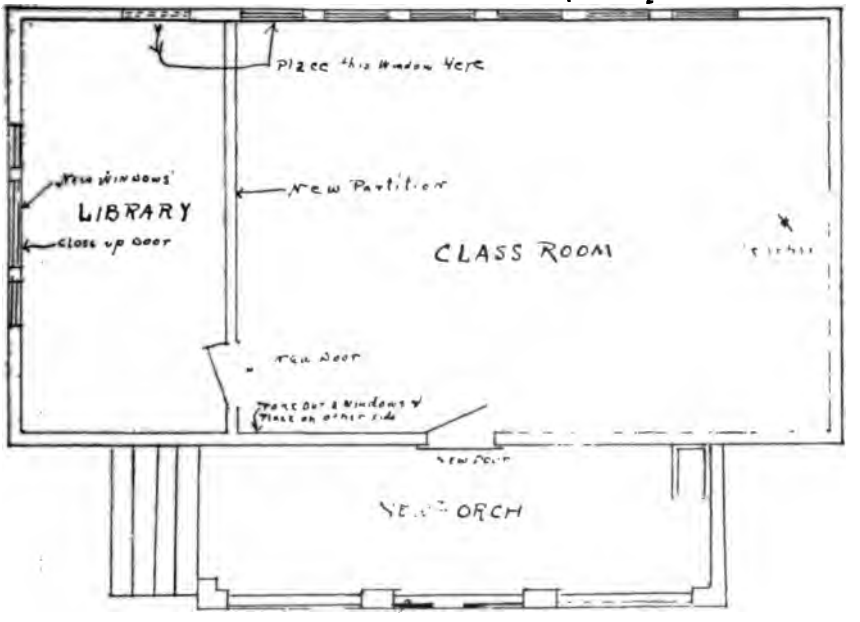


Same building remodeled, with windows banked on one side. See floor plans opposite page for detailed changes.

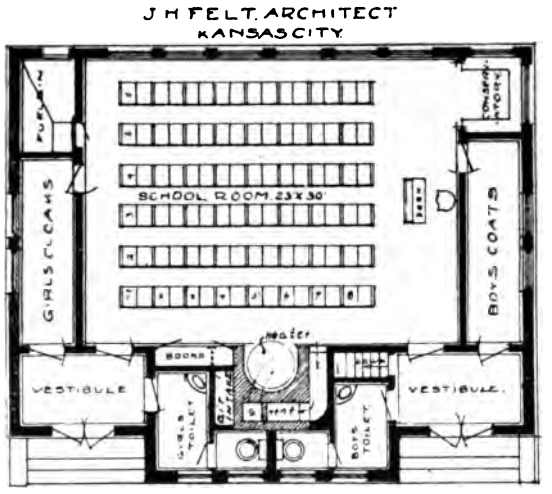


'Jolon School, before remodeling

Jolon School after remodeling



scattering about the room. The schoolroom proper is 23 feet by 30 feet. and seats forty-eight pupils in single desks, with ample aisle space between and all around the desks. The light is brought from the left of the pupils only, the windows being set within about 6 inches of the ceiling. The heater is set in a brick receptacle, and immediately back of it is the smoke flue and vent flue. The air intake marked just to the left of this flue is supplied with fresh air through the circular lower windows in the gables, thus insuring pure air at all times. It is taken down under the heater and exhausted directly across the room towards the cooling surface, which is the windows, and by means of the vent flue the lower strata of air is constantly being taken out at the floor line and exhausted out above the roof, thus causing the pure warm air to descend equally all over the room. It will be noticed that the toilet rooms have outside windows opening directly into them, and that one waste and supply pipe do for both toilets. One great advantage of this arrangement, in addition to separate entrances for the sexes, is the fact that there is but one exposure of the schoolroom to the weather, and that is on the rear where the light is brought in, as the cloakrooms, vestibules, etc., protect the schoolroom on three sides. This will make the room very much easier to heat in severe weather and effect a very great saving in fuel. The stairway opening into the boys' vestibule goes down to a small basement which contains the compressed air tank which furnishes the water supply for the plumbing. Should it be desired to have a small manual training room, it could be easily accomplished by lengthening the building, thus enlarging the cloakrooms, one of which could then be used as a manual training room, and the other one divided and used for the two cloakrooms. Whether this building is built of brick or wood, the heater should be set as shown by the plan, in a brick receptacle, which very much lessens the danger of fire.



(B) PLAN OF A ONE ROOM SCHOOL BUILDING.

A PROPHECY.

Here is a picture of a special school car that is run on one of the surburban electric roads in northern Ohio, near Cleveland. It is a shadow forecasting the future in our own State. The time is coming when all California will be a gridiron of electric roads, operated by the power from our Sierran streams. Consolidated schools and rural high schools will be made populous and powerful by reason of convenient universal transportation. A new law has just been put on our statute books authorizing trustees of rural schools to arrange for the transportation of their children. Our schools must keep pace with the great economic changes or be left behind in the procession.

Special school trolley car.

And now, hark ye. If the people who are here when all these myriad future railroads are projected will attend to business and look into the future, they can confer a wonderful blessing upon generations of California children as yet unborn.

Let them grant no franchise in all the future that does not contain a vigorous proviso for all children on their way to school to be forever carried free!

Does this seem strange?

But it is *right*. Why shouldn't a public service corporation, seeking a great privilege from the people, agree to help in this way to educate the children of the State? Why should a boy or girl ever be kept out of school for lack of railroad fare? The thing has been tried, too; and it works all right. There is an idea here for every one to think about, to spread abroad, *to act* upon—for a hundred years to come!

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STATE OF CALIFORNIA

OFFICE SUPERINTENDENT OF PUBLIC INSTRUCTION

ARBOR DAY MANUAL

FROM THE

TWENTY-THIRD BIENNIAL REPORT

OF

EDWARD HYATT

SUPERINTENDENT OF PUBLIC INSTRUCTION

SACRAMENTO, CALIFORNIA
1909

PRINTED AT THE STATE PRINTING OFFICE
W. W. SHANNON, SUPERINTENDENT

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ADIES AND GENTLEMEN:

We have heard much of late concerning our civic duties growing out of the great movement for conservation of natural resources. The handiest tool for us to use in making practical application of the conservation idea is Arbor Day. If ., we may use this day to carry a patriotic spirit to the young now in our charge; a spirit that will be the strength and safe- of the State bye and bye.

this richly worth while?

ıe theory that your answer to this question is "Yes, indeed!" e prepared this little Arbor Day Manual, offering some sugges- nd some materials to use in determining how the day may be served in each of your schools. Your own plan will be best for Do not feel constrained to follow any of these suggestions slav- ut shape them to your ends.

* * *

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* * *

I trust this idea may appeal to you, that it may receive your attention, your energy, your thought. It can not do you any harm and it may do you good. And through you it may work great good to generations as yet unborn. I leave it with you.

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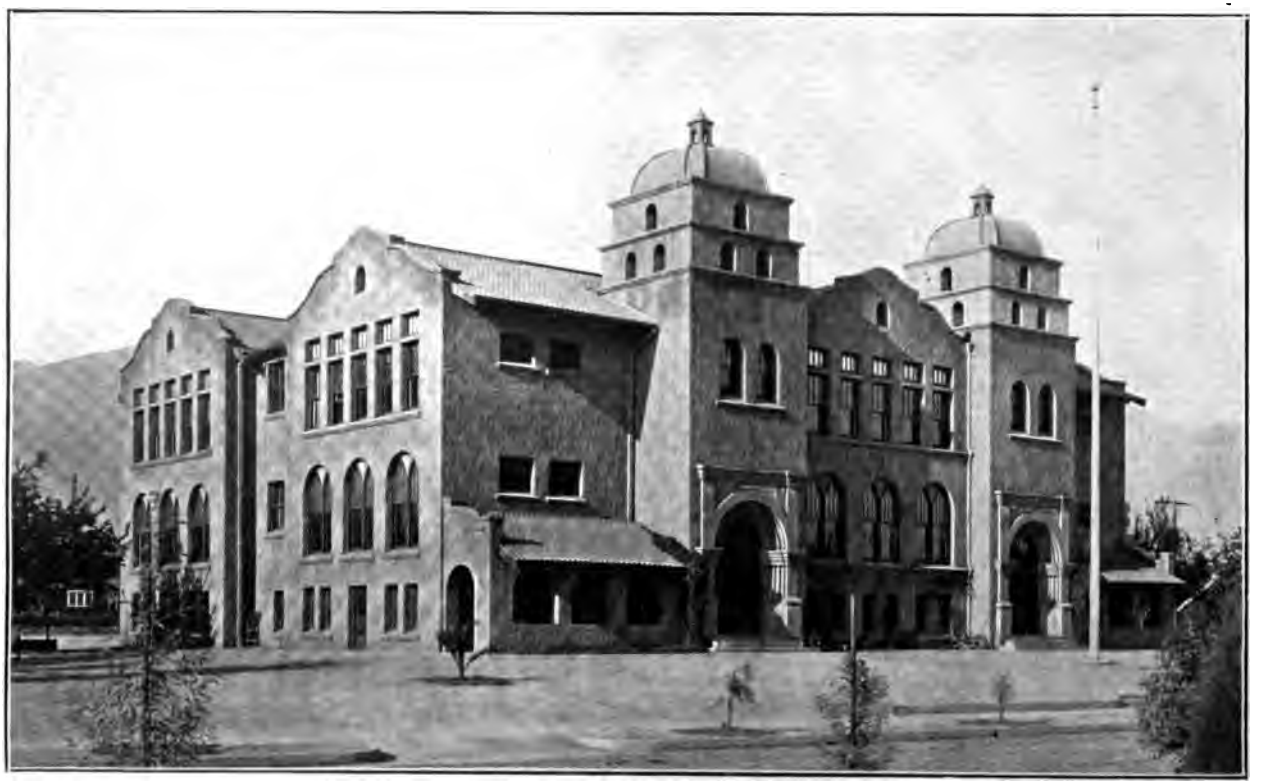

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A barren schoolroom, a barren school yard can produce naught save a barren-hearted pupil, insensible to that refining influence so neces-

sary an accompaniment to education. Let us, then, have beautiful school interiors and sensible school exteriors throughout the State, to the end that its embryo citizens may feel for several hours at least, each day, that subtle, essential influence of social culture which walks hand in hand with educational advancement. The celebration of Arbor Day is a step in this direction. Let us make wise use of it.

PLANNING THE WORK

THE PLANTING of school grounds should be planned and executed with the greatest care, for the work of the school whether it be indoors or out is educational and has its influence upon the present as well as the prospective guardians of the State. The planting material should be carefully chosen and the disposition of the trees and shrubs upon the grounds made to conform to the extent, character, and uses of the grounds. The three elements to be secured in the plantings should be,

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Let me urge on you, in making your plan, not to waste your energies in placing great quantities of varieties of plants and flowers in the space given, or in stripping away all the old landmarks and reducing your grounds to formal gardens of walks and beds and borders, but to take things as you find them, to study them closely and in detail, and in their relation to the whole, that you may know best what use to make of them; and above all to get such a conception of the possibilities of that bit of landscape which you have set about to beautify, that you will arrange for the planting of no tree or shrub or vine without first being able to see just what its relation to your whole scheme will be.

THE PLAN

The first essential for the work of beautifying the grounds will be a plan. The beginning of this plan may be a rough sketch of the area on which the school building stands, with directions and distances marked upon it. Next, locate the permanent objects, such as trees and buildings. Determine next the main lines of travel leading to the schoolhouse and use these as a basis for the permanent walks, unless there is some good reason for changing the main paths. The walks and drives should be straight, if distances are less than 100 feet, and gently curved if longer, so as to admit of the use of trees and shrubs along the border. The outlook from each door and window should be carefully inspected before determining which objects in the landscape should be retained in view and which hidden or concealed by the use of trees and shrubs.

"Pleasant School Surroundings Make Happy Hearts and Smiling Faces."

Trees and shrubs should be confined chiefly to the borders of the place, and in rural schools the trees should be so located as to give protection from storms in winter and from the sun in summer, and at the same time to produce a pleasing effect. Shrubs may be employed to an advantage in screening unsightly objects. The plans of the grounds will serve both as an exercise in geography and arithmetic, and if the pupils are encouraged to make such designs that their interest in the work will be assured and a practical application of the principles *taught in the* schoolroom will be a result of no little value.

WHAT TO PLANT

Lawns are the foundation of all decorative planting. A good, well-kept lawn contributes more to the beauty of grounds than any other single factor. They require constant attention, a sure water supply and are therefore possibly only practicable in city school yards where a gardener is employed the year round.

SHRUBS

SHRUBS should never be planted singly in the school yard, but should be grouped in masses in fence corners and elsewhere. The location of the shrubbery should be very definitely indicated on the school ground plan. Large groups of shrubs may be used as screens for outbuildings. Use the taller varieties as a background and plant the lower in front. If it is desired to plant shrubbery along a fence line, do not plant with geometric exactness, but let the outline waver, showing high dense masses in some places and perhaps only single low bushes in others.

VARIETIES OF SHRUBS

THE LILAC is one of the best shrubs for school grounds. Its deep green leaves make a good screen during most of the year, and the masses of beautiful, delicately-tinted and perfumed blossoms come during the school term. It is especially free from insect attack.

EUONYMUS JAPONICUS depends upon its strongly-colored yellow and green leaves for its beauty. Grows equally well in the north or south and is a hardy shrub.

SYRINGEA OR MOCK ORANGE grows well, and produces excellent foliage and pretty white blossoms.

POMEGRANATE when planted thickly, is good in fence corners and along roadways. Its brilliant scarlet flower and large, peculiar fruit, filled with juicy morsels, make it a valuable addition to school plantations.

BRIDAL WREATH is showy when in bloom, and is a good "filler."

OLEANDER grows well, produces a strong foliage, and bears an abundance of flowers. It is said to be poisonous for stock.

PORTUGAL LAUREL is splendid, forming a solid pyramidal mass of green. Cherry Laurel makes a larger tree, equally as good, not pyramidal. Both have large, glossy evergreen leaves. The Cherry Laurel has semi-edible fruits. Neither of these is a true laurel. Our Native Laurel, or Bay Tree, is splendid for some places.

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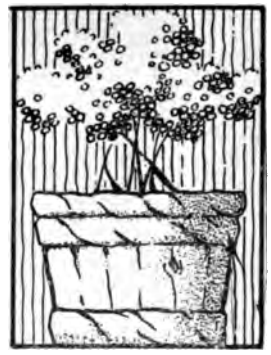

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We would begin something like this, assuming that the yard is fenced. If it is not, then the teacher will have a little harder task. Let the teacher decide to celebrate an Arbor Day by planting some trees or shrubs and having any other exercises he likes. The first thing he will do, of course, is to talk to the trustees about it. They will say that they are very busy; that they have tried planting trees before; and that they do not believe it will pay. Let their excuses go in at one ear and out at the other. Keep after them, judiciously of course, but don't take "No" for an answer. They are patient men, at least all the trustees we know are. Get their wives and other women of the neighborhood interested. Find out where trees which will grow in that particular section can be obtained, and plan some way to get some. Plan for a basket lunch with the children at noon. Get some of the men to promise to come and dig holes for the trees. Get some one to bring three or four barrels of water, if there is not sufficient water at the schoolhouse to give each hole a half barrel, and each tree a half barrel after it is planted.

A plan of the grounds should always be made before any work is done, and on this plan should be indicated the exact spots for planting trees, shrubs, vines, and flowers. The first thing to locate, however, is sufficient playground for the children. The latter must always have room to run and play, and must never feel restricted by the too near presence of flowers and shrubs. But even after large clear play spaces have been set aside you will find ample room for ornamentation. Then plan with care and for years to come. Trees and shrubs are so slow of growth that no mistakes in original planting can be afforded.

Let me urge on you, in making your plan, not to waste your energies in placing great quantities of varieties of plants and flowers in the space given, or in stripping away all the old landmarks and reducing your grounds to formal gardens of walks and beds and borders, but to take things as you find them, to study them closely and in detail, and in their relation to the whole, that you may know best what use to make of them; and above all to get such a conception of the possibilities of that bit of landscape which you have set about to beautify, that you will arrange for the planting of no tree or shrub or vine without first being able to see just what its relation to your whole scheme will be.

THE PLAN

The first essential for the work of beautifying the grounds will be a plan. The beginning of this plan may be a rough sketch of the area on which the school building stands, with directions and distances marked upon it. Next, locate the permanent objects, such as trees and buildings. Determine next the main lines of travel leading to the schoolhouse and use these as a basis for the permanent walks, unless there is some good reason for changing the main paths. The walks and drives should be straight, if distances are less than 100 feet, and gently curved if longer, so as to admit of the use of trees and shrubs along the border. The outlook from each door and window should be carefully inspected before determining which objects in the landscape should be retained in view and which hidden or concealed by the use of trees and shrubs.

"Pleasant School Surroundings Make Happy Hearts and Smiling Faces."

Trees and shrubs should be confined chiefly to the borders of the place, and in rural schools the trees should be so located as to give protection from storms in winter and from the sun in summer, and at the same time to produce a pleasing effect. Shrubs may be employed to an advantage in screening unsightly objects. The plans of the grounds will serve both as an exercise in geography and arithmetic, and if the pupils are encouraged to make such designs that their interest in the work will be assured and a practical application of the principles *taught in the* schoolroom will be a result of no little value.

WHAT TO PLANT

Lawns are the foundation of all decorative planting. A good, well-kept lawn contributes more to the beauty of grounds than any other single factor. They require constant attention, a sure water supply and are therefore possibly only practicable in city school yards where a gardener is employed the year round.

SHRUBS

SHRUBS should never be planted singly in the school yard, but should be grouped in masses in fence corners and elsewhere. The location of the shrubbery should be very definitely indicated on the school ground plan. Large groups of shrubs may be used as screens for outbuildings. Use the taller varieties as a background and plant the lower in front. If it is desired to plant shrubbery along a fence line, do not plant with geometric exactness, but let the outline waver, showing high dense masses in some places and perhaps only single low bushes in others.

VARIETIES OF SHRUBS

THE LILAC is one of the best shrubs for school grounds. Its deep green leaves make a good screen during most of the year, and the masses of beautiful, delicately-tinted and perfumed blossoms come during the school term. It is especially free from insect attack.

EUONYMUS JAPONICUS depends upon its strongly-colored yellow and green leaves for its beauty. Grows equally well in the north or south and is a hardy shrub.

SYRINGEA OR MOCK ORANGE grows well, and produces excellent foliage and pretty white blossoms.

POMEGRANATE when planted thickly, is good in fence corners and along roadways. Its brilliant scarlet flower and large, peculiar fruit, filled with juicy morsels, make it a valuable addition to school plantations.

BRIDAL WREATH is showy when in bloom, and is a good "filler."

OLEANDER grows well, produces a strong foliage, and bears an abundance of flowers. It is said to be poisonous for stock.

PORTUGAL LAUREL is splendid, forming a solid pyramidal mass of green. Cherry Laurel makes a larger tree, equally as good, not pyramidal. Both have large, glossy evergreen leaves. The Cherry Laurel has semi-edible fruits. Neither of these is a true laurel. Our Native Laurel, or Bay Tree, is splendid for some places.

VINES

VINES are wonderful beautifiers and may be used to cover almost any unsightly spot on the school grounds. They look well climbing over porches and between windows, over old stumps and along fences. It is probably best not to plant vines so that they will come directly in contact with the outside of the school building, though in some cases they may preserve rather than injure it. Professor Clark gives the following device for protecting the building: "If it is deemed advisable to have the vines on the school building, netted wire fencing may be attached to the cornice. First drive staples into the cornice where it is desired to fasten the support for the vines. Then bend the free ends of the wire netting and hook them directly into the staples. The lower end of the fencing may then be fastened securely to the stakes driven into the ground directly below the cornice. This support can be taken down without injury to the vines whenever it is desirable to paint the schoolhouse."

VARIETIES OF VINES

MORNING-GLORY grows vigorously and is an active climber. Its large leaves and great bright-colored flowers will hide unsightly outbuildings and efface rough lines and poorly made fences. The variety locally known as "moon vine" is very desirable; it is vigorous with no irrigation.

VIRGINIA CREEPER is a royal vine clinging tenaciously to that which supports it and is an excellent vine for all decorative purposes. Very attractive on brick walls.

IVY, though somewhat slow growing, can be used to a great advantage as a screen for woodsheds, outbuildings, and the like, and when grown, its prunings afford the teacher a constant supply for interior decorations.

HONEY SUCKLE winds and wreaths itself about its support prettily and brings bright colored leaves and delicate clusters of slender white blossoms whose sweet perfume attracts butterfly and bee.

JASMINE grows well in the southern section: its leaves are dainty and the perfume from its tiny blossoms is exquisite.

TRUMPET FLOWER grows on a sprangly, shade affording vine; the flowers are trumpet-shaped, and of a dark red hue.

Roses of climbing varieties are excellent, if pruned and cared for.

The Banksia are very desirable, as they are beautiful and thornless. They are excellent to plant close by hydrants.

The Tecomas are very fine as vines. These and the Bignonias are very beautiful, and as they are rapid growers, they are very desirable in the southern part of the State. They are in bloom for a long time. The different colored flowers give chance for attractive variety.

Plumbago is one of our most attractive and most desirable vines in the southern counties. The great lavender colored bloom of the large flowered solanum makes it one of our most choice vines. It is tender of frost.

FLOWERS

DO NOT too greatly indulge your taste for flowers. Flowers require more attention than hardy shrubs and vines, and when school is closed for the long vacation they are apt to suffer. However, if arrangement can be made to give them proper care, a few perennials, and even some annuals may be planted if they are confined to borders and out-of-the-way places. It should also be remembered that flower beds are unsightly mounds during a great portion of the year. A few hollyhocks near one of the buildings will help to decorate, while a bed of variegated nasturtiums will give a flaming patch of color and, like the cosmos, will afford material for drawing or for color lessons. There are several hardy varieties of geraniums which grow well and without a great deal of attention. Frequent enrichment of the soil is necessary to the proper growth of flowers. Aside from those named, there are few flowers suitable for school yard planting, especially in the rural districts.

There never was a mystery
  But 'tis figured in the flowers;
Was never secret history
  But birds tell it in the bowers.

SUGGESTIONS FOR WINDOW BOXES

BOTH city and country schools have found that outside window boxes, properly prepared and properly cared for, add materially to appearances of otherwise unattractive buildings. These boxes should never be built in second story windows nor suspended by wires or cords, for kept in such a manner they are a constant menace to the children who play beneath them. One accident caused by an insufficiently secured window box would do more to harm school improvement work than all window boxes are worth.

Make the box six or eight inches deep, twelve to fifteen inches wide, and as long as the window is wide. Build securely upon the window sill, but do not allow box to interfere with free movement of windows.

Fill the boxes with fine, rich soil, and fasten firmly to the sunniest window. Place similar boxes on the porch or fence. Plant morning-glories on the side nearest the house and train up on strings. Plant climbing nasturtiums near the outside to hang down over the box.

Plant marigolds, asters or verbenas in middle of box. Plants should stand four or five inches apart.

Boxes need water every day.

In watering care should be taken not to overflow the box so that the adjacent school wall will become soil-stained and defaced. Plant the flowers that will grow best in cramped quarters and are best suited for decorative and nature study purposes.

* * *

The best and highest thing a man may do in a day is to sow a seed, whether it be in the shape of a word, an act, or an acorn.

SAVE THE BIRDS!

BY HENRIETTA F. GROUT.

WHEN the equilibrium is destroyed between plant and insect life by the destruction of insect eating and seed eating birds, man suffers. One of the objects of the Audubon Society is to create a sentiment against the slaughter and use of birds for decoration, and now that the furor is at its height, the thousands of members throughout the country should at least do some active work in creating a public sentiment against this cruel fad. It is to be confessed with shame that woman's love of ornament has, in the last year, led to the destruction of thousands of humming birds, bobolinks and red wing blackbirds. Texas alone furnished 10,000 white egrets and one village in Long Island sent 70,000 bird skins to the New York market. The small state of Delaware furnished 20,000 in two months. The total slaughter the past year reached 500,000,000 birds in our own country, whose plumage was used to decorate women's hats.

Thoughtlessness and ignorance can no longer be used as excuses for this barbarous fashion. So many appeals have been made to the head and heart of women throughout our country, and many noble women have pledged themselves to wear no bird plumage but ostrich feathers. Let us women continue the crusade. Let the women say the word and this useless sacrifice of bird life will cease and farmers will not need to spend $400,000,000 annually in destroying insects, the birds will eat their natural food, insects, grubs and weed seeds, and our eyes and ears will be delighted with the beautiful forms and sweet songs of innumerable birds.

TREES

YOU may have some fine trees growing on the school grounds, but if you have not, a few strong specimens should be set out. Some may also be planted outside the grounds, along the road. If the trees selected embrace both timber, fruits, and ornamentals, the greatest variety will be afforded both for skill in planting and for study. The timber trees should be representative of the region and include both

deciduous and evergreen species. The preponderance of the species need not be based on the natural forest of the region; on the contrary it will, in a majority of cases, be found most desirable to have a predominance of deciduous trees in the school ground plantings.

Trees are protective in proportion to their power to deflect or break the force of the wind and the part they play in screening or shutting out undesirable and obtrusive objects in the landscape. They are beautiful as individuals because of their foliage, flowers, or habit of growth, and collectively in proportion to the harmony existing in their ever-changing colors or their manner of growth. In fact trees, like individuals, possess marked family characteristics; in the tree these peculiarities produce its expression. The expression of some trees is somber and sad, of some, bright and happy, and of others dignified and strong. The aspect of a place, as well as its effect, upon those who frequent it is largely determined by the expression given it by the plants surrounding it. Trees, without our knowing it, exert a decided influence upon us. If we are in harmony with them they rest and inspire us; if downcast, and the expression of the trees about us is *somber,* we get the blues and become discouraged. The expression of

the trees used about the home or the school should be elevating and inspiring rather than somber and depressing.

The United States Department of Agriculture has the following to say about trees to plant in school grounds:

> The first rule to lay down is to plant only the kinds that are known to be hardy. A school-ground plantation is no place for experiment. Naturally the trees will have to endure greater hardships than those of private plantation; they will be likely to have less cultivation and be subject to more abuse. No matter how strict the rules, the soil about them will be more or less trampled, and twigs will sometimes be broken from their tops. Any tree that can not endure moderate abuse of this kind should not be given a place on the school ground.
>
> On account of difference in soil, a tree that thrives in one place in a locality may not thrive in another place. Sandy soils and clay soils are often found near together, and trees that grow thriftily in sandy soil may have a hard struggle to exist when planted in clay. For this reason both the soil and the subsoil of the school ground should be carefully examined, and a list should be made of trees in the neighborhood that are thriving on soils of the same character, and no other species should be used. Much better success may be expected with a soil and subsoil of a porous character than with one that is tenacious and impenetrable. Yet a careful study will show numerous species adapted to each kind of soil.

The school ground being permanent and the need of trees continuous, for the most part long-lived trees should be used. But where the present need of trees is great, there is another side to the question. A

short-lived tree grows quickly, coming into early usefulness, and serves its purpose for from twenty-five to fifty years. A long-lived tree usually

grows more slowly, but serves its purpose for a century or more. In many cases it is advisable to use the two kinds in such a way that the long-lived trees will become useful about the time the short-lived trees reach maturity. The latter then can be removed, leaving the ground to the long-lived trees.

TREE PLANTING

TREES for school grounds and yards, along roadsides and streets, must be such as are least liable to suffer from injuries; they should be compact and symmetrical in shape, free from objectionable habits, such as bad odors, root-sprouting, frequent dropping of parts, and from insect pests, and, if planted for shade, should have a broad crown and a dense foliage, budding early in the spring and retaining leaves long into the fall.

The Groves Were God's First Temples.

Trees native to the region in which the planting is done usually have more promise of success and are generally less costly than exotics. Trees from well-managed nurseries are preferable to those grown in the forest, because

their root-system is better prepared for transplanting. Rapidly growing trees, although giving shade soonest, are mostly short-lived and become the soonest unsightly. Trees from the forest have a wide-spreading root-system, which is difficult to take up and transplant. Those which have grown in the shade of the forest, as a rule, do not start easily in the open sunlight; those from the cool north sides are apt to sicken when placed in hot exposures, and vice versa. A healthy tree transferred from poor soil into better conditions will show itself grateful by vigorous development. If forest trees must be used, it is better to select those growing on the edges and thus most isolated, because they have already learned to protect themselves by growing heavier bark. If trees growing in thick woods are taken up they are almost sure to die, no matter how much care is given them, because they are accustomed to protection from surrounding trees and brush.

Do not try to transplant very large trees. Trees of any size can be successfully transplanted; but in proportion to the size grows the difficulty, the amount of work, and the care necessary. As a rule the largest size should not exceed two to three inches in diameter at the base and ten to fifteen feet in height. Those one half that size will probably make better growth, because less of their root-system will be curtailed in taking them up for transplanting. A tree suitable for transplanting should have (*a*) an abundance of fibrous roots (*b*) in a normal form, and (*c*) a well proportioned development of shaft and crown.

THE WORK OF TRANSPLANTING

Transplanting is an artificial process, requiring both knowledge and care. If there is a skilled tree-planter in the neighborhood, interest him in Arbor Day; take his advice about the better trees to plant first and their location, and get him to see that roots and branches are properly pruned, that the holes are of the proper size and depth, that the soil is filled in around the roots as it should be, and that the tree is properly protected. If he will let the older pupils assist him in doing the actual work, and afterward talk to them in a simple, direct way

about the care of the trees, so much the better. Be sure to give him the opportunity.

The time for transplanting trees varies with the locality and the season. Trees should be moved before they have budded and blossomed, for after the leaves have opened they can not obtain sufficient nourishment from the newly planted roots, and after sapping the life from the tree, wither and die.

In considering how the transplanting is to be done we must remember that a tree is a thing of life, that it can not be removed from its place of growth and set in another place without interfering for a time with the regular operation of its vital forces. For this reason the transplanting should be done at a season when the vital forces are least active, and care should be taken to avoid as much as possible all injury to the roots of the tree, both in taking it up and in resetting it. The time between the two operations should be as short as possible, and during the interval the roots should be entirely protected from both sun and wind by covering them with damp moss or dipping them in a thin mud made by mixing rich soil and water, and then wrapping them in a coarse damp cloth or canvas. If the removal and resetting can be done on a cloudy day, so much the better. Not even the fine, fibrous rootlets should be allowed to become dry. It would be well if the hole could be prepared in advance for the reception of the tree. Let it be broad enough to receive the roots without any bending or cramping. It may better be too broad than too narrow and a little deeper around the margin than in the center. It would be better if deep enough, that it receive a layer of rich garden soil or leaf mold three or four inches thick on which the tree may stand. A pile of similar soil should be ready as soon as the tree is put in position to sift over its roots and pack down upon and between them. Settle this soil still more about the fibrous roots by giving it a copious sprinkling with a watering pot. Finally, fill the hole with soil and cover the surface with a layer of manure, to act as a mulch and keep the soil moist about the roots. Put no manure in the hole nor in contact with the roots. Plant no tree so near the schoolhouse that in after years it will unduly shade the windows and darken the schoolroom. Do not plant the trees too close to each other. Give them an abundance of room to form broad, well shaped heads. Before taking up the tree to be transplanted, it is well to cut away any slender, feeble, irregular or superfluous branches, in order to reduce the head to good shape and to diminish the demand that would otherwise be made upon the roots for support at a time when they are not able to supply the usual amount of moisture and nourishment.

HOW TO PLANT A TREE

The following, from "The Tree Book," by Doubleday, Page & Co., esents briefly and forcibly the steps to be taken in the proper planting a tree:

1. Dig the hole wider and deeper than the tree requires. If the tree st fits into the socket the tips of the roots will meet a hard wall which they are too delicate to penetrate, hold fast to or feed in.

2. Be sure that the surface soil is hoarded at one side when the hole is dug. This soil is mellow and full of plant food. The under soil is harder and more barren. Some rich garden soil can well be brought over and used instead of this subsoil.

3. Take up as large a root-system as possible with the tree you dig. The smaller the ball of earth the greater the loss of feeding roots and the danger of starvation to the tree.

4. Trim all torn and broken roots with a sharp knife. A ragged wound below or above ground is slow and uncertain in healing. A clean, slanting it heals soonest and surest.

5. Set the tree on a bed of mellow soil with all its roots spread aturally.

6. Let the level be the same as be- re. The tree's roots must be planted, at not buried too deep to breathe. A ick laid across the hole at the ground vel will indicate where the tree "col- r" should be.

7. Sift rich earth, free from clods, mong the roots. Hold the tree erect nd firm; lift it a little to make sure ne spaces are well filled underneath. ack it well down with your foot.

8. If in the growing season, pour in ater and let it settle away. This estab- shes contact between root hairs and oil particles, and dissolves plant food r absorption. If the tree is dormant o not water it.

9. Fill the hole with dirt. Tramp in well as filling goes on. Heap it somewhat to allow for settling. If subsoil is used, put it on last. Make the tree firm in its place.

10. Prune the top to a few main branches and shorten these. This applies to a sapling of a few years whose head you are able to form. Older trees should also be pruned to balance the loss of roots. Otherwise transpiration of water from the foliage would be so great as to overtax its roots, not yet established in the new place. Many trees die from this abuse. People can not bear to cut back the handsome top though a handsomer one is soon supplied by following this reasonable rule.

11. Water the tree frequently as it first starts. A thorough soaking of all the roots, not a mere sprinkling of the surface soil, is needed. Continuous growth depends on moisture in the soil. Drainage will remove the surplus water.

12. Keep the surface soil free from cakes or cracks. This prevents excessive evaporation. Do not stir the soil deep enough to disturb the roots. Keep out grass and weeds.

TEACHERS, PLANT TREES!

Teachers, plant trees! They will reward you. We can not all find time nor well afford to build anything like the triumphal arches of the Cæsars to commemorate our deeds upon the school ground, but we can easily plant a few trees in our school yard which will stand as living monuments to what we accomplished, long after our every other endeavor has been wrapped in the paper of recollection, perfumed by the lavender of memory, and long covered by the dust of time.

TREES FOR PLANTING

ACACIA BLACK-WOOD—An evergreen of value in semi-arid regions; produces symmetrical crown and shapely trunk.

CATALPA HARDY—Grows rapidly, pretty foliage and bloom, durable wood. Must be protected from high winds and stock, branches brittle.

ELM, SCOTCH—Splendid tree for street use; foliage luxuriant and comes early; trunk round and stout; trees symmetrical. Probably best of elm varieties.

ELM, CORK—A hardy and vigorous tree of great value for roadside or sidewalk planting. Shapely and easily grown in Northern California.

GREVILLEA—A well balanced tree of divided leaves and sprays of brilliant blossoms; used with much success in Southern California. Somewhat unsightly as it grows old.

GUM, BLUE—Commonest of the many varieties of Eucalyptus; tall, noted for curative properties and value of wood; not good for school yards except as wind break, on account of spreading roots.

HAWTHORN, ENGLISH—An attractive small tree.

LOCUST—Wood is hard, close-grained and strong; makes splendid shade tree, and is suitable for large playgrounds; bears a profusion of fragrant flowers.

LINDEN—An excellent tree for the coast section.

MAPLE, CALIFORNIA—A native tree, broad leaved, clean in growth, of quick growth, adapted to all soils, though doing best in loam.

MAGNOLIA—A thrifty tree with remarkably fine leaves and waxy blossoms. A decorative tree.

POPLAR, CAROLINA—Grows well, is fine appearing and very shapely.

POPLAR, SILVER—So called from silvered leaves which flash with every breeze. Ornamental, hardy and of striking appearance.

PECAN—Adapted to the interior valleys where it acquires great size.

PALMS—A great variety of palms; of great decorative value, of rather slow growth, require much room. Suitable for lawns, wide avenues or parked spaces, giving a tropic air to the landscape.

PEPPER—Especially adapted to Southern California; delicate Nile green foliage, clusters of brilliant red berries, and graceful, drooping foliage make it an excellent tree for planting. Stands drouth well, does best in hot climate, and is perhaps the best of all shade trees south of Sacramento.

UMBRELLA—Affords good summer shade, has crown of dense foliage, which in autumn takes on beautiful hues. Especially adapted to San Joaquin Valley and the south.

WALNUT, CALIFORNIA—Another tree native to the soil; a thriving, productive and easily propagated tree. The English Walnut is also a good type of tree.

TREES, SHRUBS, AND VINES

SUITABLE FOR CALIFORNIA SCHOOL GROUNDS.

By Dr. Harvey Hall, of the University of California.

TREES

Acacias are eminently adapted to school grounds; rapid growers not particular as to soil, hardy, easily cared for. Of the feathery-leaved sorts *Acacia mollissima* is perhaps the best and develops into a larger shade tree with an abundance of yellow flowers in early spring. *A. melanoxylon*, a broad-leaved species, has a more dense foliage and is of rather somber aspect. *A. baileyana* is very handsome as a lawn tree; growth erect, foliage silvery-white.

Albizzia is often mistaken for Acacia, which it resembles, but it is even more rapid in its growth, endures considerable drought, and has larger compound leaves.

Australian Bush-cherry is a most dignified evergreen tree, carrying its head high, but with gracefully drooping sprays of rather small glossy-green leaves. The edible fruits may be objectionable in a tree for school yards.

Camphor trees are suitable for districts of little or no frost. It will furnish material for demonstrating the commercial preparation of camphor.

Cottonwoods are large deciduous trees suitable for playgrounds where shade during the summer months is desired. Best grown on low ground where the subsoil is moist. Easy and rapid.

Lindens are among the most hospitable of all, their whole aspect being one of welcome. The generously broad leaves furnish abundant shade except in winter. Hardy and easily grown. White and Silver Linden is the best.

Maples are well known. Where a large tree is needed our native Broad-leaved Maple should be used. The Silver Maple is somewhat less spreading but more handsome.

Mayten "Smilax Tree," the slender parent twigs and small oval leaves, simulating sprays of smilax. A slow-grower, eventually forming a tall tree. Evergreen and perfectly hardy.

Oaks are slow growers, but a few should be planted, where possible, as a legacy for future generations. The native evergreen Field Oak, or Encina, is one of the best for shade purposes.

Pepper trees are always satisfactory. Care should be taken in planting to see that only staminate trees are used, since the berries of pistillate trees cause objectionable litter.

PLANES are to be considered along with Maples, having the same general characteristics. The Oriental Plane, related to our native so-called Sycamore, is by far the best sort, forming as it does a symmetrical round-topped tree.

MORETON BAY FIG. This is sometimes called Rubber Tree, and in fact may be considered as one sort of rubber tree. It grows to immense size with widely spreading branches which will eventually throw down aërial roots, as in the case of the noted Banyan. Suitable only for coast counties.

TAMARISK. Here we have an easily grown beautiful tree particularly adapted to hot dry climates. The soil should be kept fairly moist if rapid growth is desired, but the tops will endure the hottest blasts of our deserts. The feathery, spray-like foliage and rose-colored flowers especially commend it.

SHRUBS

BOTTLE-BRUSHES are so named because of the odd shape assumed by the brilliant red flower clusters. Eminently adapted to dry situations and stand pruning well. *Callistemon speciosus* is the most showy.

CASSIA. An evergreen loosely branched plant with showy yellow blossoms most of the year. Requires but little attention, is perfectly hardy, and a very rapid grower.

CATALINA ISLAND CHERRY, a native son, is one of the very best evergreen shrubs, largely because of its glossy green foliage, which remains clean even to the end of a long dry season. The flowers are rather small, but are followed by large purple cherries, which, however, are scarcely edible. Evergreen.

CHOISYA is an aristocratic little shrub with glossy-green leaves and beautiful flowers, resembling orange blossoms.

COPROSMA BAUERI is a rather ungainly member, but its bright green leaves are as glossy as though varnished. The breathing pores are collected into minute depressions which may be seen on the back of the leaf. This is to protect them from the drying action of the hot winds, for the species is a native of the New Zealand deserts; evergreen and a slow grower.

DURANTA and PLUMBAGO, yield blue flowers in masses.

ESCALLONIA is much used in all parts of California. It is a rather coarse shrub, but is easily grown. The deep green leaves and red or white flowers are pleasing.

LION'S EAR will make a good showing the first season; bushy, with showy scarlet flowers in whorls.

PITTOSPORUMS are plants of many sorts. They are easily grown and several of them produce very fragrant blossoms. Some are adapted to hedge planting, others form shrubs, still others become large trees.

PRIVET is a tall, very hardy shrub with small white flowers in fragrant clusters, but most prized for the beauty and persistence of its foliage. The so-called California Privet is capital for trimmed hedges.

PHOTINIA is a large, rounded shrub with large, glossy leaves, some of which assume beautiful shades of pink and red, very conspicuous in the mass of green foliage. Unusual, but one of the best.

VINES

AUSTRALIAN PEA VINE. A rapidly growing vine particularly suitable for covering outbuildings and for screens. The small leaves persist throughout the winter. Flowers showy, pea-like in shape, magenta.

IVY of several sorts is grown with great success in California. The English Ivy, which is the most easily grown, requires no care, is splendid for covering old stumps or outbuildings and as a substitute for lawns on embankments. The evergreen leaf is broad and angular, thick and of a dark green color. The Boston Ivy is more dainty, of a light green color, passing through all shades of pink to scarlet as winter advances. It is capital for brick or concrete walls and chimneys, but also climbs over frame buildings. The Virginia Creeper is sometimes confused with Boston Ivy, but differs in having compound leaves. It may be used the same as Boston Ivy. The German Ivy is the most rapidly growing of all, and is particularly suitable for screens. It does not cling to walls as do the other sorts.

KUDZU-VINE. Suitable for large arbors or screens where foliage is desired only from spring to late summer. Very rapid grower, a single plant covering a trellis twelve feet high and twice as long within a few months. Leaves large, flowers inconspicuous. The immense root yields well.

PASSION VINES are perhaps the most rapidly growing of all except Kudzu, but their foliage is so heavy and dense that wooden buildings covered by them are subject to decay in rainy portions of the State.

"POTATO VINE" is a misleading name for *Solanum jasminoides* a common white-flowered vine. It is a very fast grower, free bloomer, and easily obtained, but the stems are inclined to become straggly. *Solanum rantonetix*, a recent introduction, now offered by a few nurserymen, is much superior. It is blue-flowered.

TRUMPET CREEPER may be trained either as a bush or as a vine. Its rapid growth, pleasing foliage (of a clean, lively green color) and brilliant orange colored blossoms make it a favorite for exposed places, particularly on walls and pergolas.

HERE is a picture with a history. It is a photograph of a little rural school away down in southern California. I knew it well. It was in an almost rainless region, with scanty vegetation depending on irrigation. The school was on top of a dry hill, where water for irrigation was impossible. The very idea of raising trees there was absurd.

But old man Wright was one of the trustees, and he loved the school. He dreamed of it adorned by verdant shrubbery. He planted trees anyhow, despite discouragements. And through the long, hot summer season he hauled water to them with a barrel on a sled. In time the trees struck root so deep they could take care of themselves without the old man's barrel. And the school became a beautiful place, admired by all who passed that way, a pleasure in a desert land, the pride of the people. Trustee Wright has been dead now for lo, these many years. But the beautiful school on the hilltop with its waving trees is a monument to his memory. Isn't it better than granite shaft or marble urn?

Now what's a story without a moral? The moral of this one is that there's no excuse for squalid, bare, desolate, God-forsaken school grounds anywhere in the length and breadth of this rich and splendid State. When you see such a one it is a glaring sign that there is no one there who loves the school. It is a reproach upon the whole community. For shame! Why, it would be better for little Betty Jones to plant a tiny acorn or a walnut and carry water to it in a tomato can than to leave the public school naked to the world.

IN THE SHADE OF THE OAKS

Trees are gracious things. They give their blessing to rich and poor alike. Little children are attracted to them spontaneously. They love to play their games beneath the grateful shade. They gain strength and courage by climbing among the sturdy branches.

Fortunate the school like this one in Napa County that has some of the original forest monarchs on its grounds; great trees round which the children's school life revolves, and which linger in their minds as pleasant memories in all their later years.

And then, how fortunate again that it is so easy in California to raise some giant trees when there are none naturally about the school.

Plant some! Plant them *now*, not in the sweet bye and bye. Plant a *few* now, so they'll be growing while you are thinking about the big things for the future. Plant the ones you *know* will grow at that place. Plant them so they *can't be killed* by stock or children. Plant them so they'll be cared for *through the summer*. One or two great trees, growing luxuriantly are better for than a hundred neglected starvelings. One big fine tree, with room for swings and teeter boards, with place for enjoying luncheons in the shade—just *one*—will make the difference between desolation and good cheer. And where is the spot in all California that will confess its soil so sterile, its people so poor in spirit that they can not grow even *one* tree?

WITH THE TRUSTEE

EVERY school in the State should have at least one tree. If after three years of Arbor Day observances not one tree is growing, it is a discredit and a reproach to the pupils, to the teacher, and to the Trustees. There can be no sufficient reason given for such a state of affairs, though lame excuses may be found if sought for.

One may say, "Oh, there is no fence round our school, and it is no use to plant, for the stock will destroy the trees." True, but it wouldn't hurt that school and that teacher to get four posts, some boards and wire to build a fence to protect *one tree.* A nice pepper, or cottonwood, or umbrella, that had been generously cared for for three years would make quite an oasis in your desolation.

Another will remark, "Oh, we have no water on our schoolgrounds, and we don't believe in planting things to die." Very good; but one of the handsomest school yards in the State never had any water but what one of the trustees hauled in a barrel, without pay.

There is a picture of it in another part of this Manual. A lively school would find a way to make *one tree* grow freely and luxuriantly, even if they had to carry water in a tin cup to do it.

Others exclaim, "We are not sure the school will remain here—there is talk of a change—no use to plant anything until we see." It would not hurt the school to raise a tree or two anyhow; the children would be better off and the world would be none the worse even if you did move away and leave them. Plant a tree; it will be growing while you sleep. An Arbor Day program in a school without a *tree is Faith without Works*; and Faith without Works is dead.

WITH THE TEACHER

On the Way to School.

IT IS a matter of common observation that neat and orderly surroundings tend to influence man's development and moral character for good. Business men, men who own large ranches, the corporations, and the railroads all recognize these principles. Railroads spend money in planting and caring for little parks at almost every station. They cultivate all kinds of flowers and ornamental shrubs and trees. They keep everything in order around the depots. Board and iron and all other materials are carefully piled away where they belong. There is no return in money from most of this work. But the influence on the employés of the railroad is most beneficial. They are taught by this method that everything must be carefully attended to on account of the sacredness of human life. People would not long patronize a railroad where every thing was lying around in a loose and shiftless condition. They would most severely and rightfully judge that the moral condition, or regard for human life would be as bad as the physical conditions. Therefore, we feel that we can not easily become too enthusiastic over the improvement of school grounds.

Work for the improvement of your school surroundings, and you work for the benefit of education's cause. Be not discouraged. Rather be encouraged by the work already done. "Accuse not Nature, she hath done her part; do thou but thine."

DO	DON'T
Plant shrubs, vines and trees.	Mark walls and buildings.
Pick up loose paper.	Injure shade trees or flower beds.
Burn or destroy rubbish.	Spit on the floors and sidewalks.
Destroy weeds.	Throw paper and fruit skins on the sidewalk or ground.

Perhaps you have tried to do Arbor Day work and have failed. To you we would say, try once again, and yet once again after that, if it be necessary. To you who have tried and in the face of discouragement have succeeded in beautifying either the school ground or the school interior, we extend our congratulations. Your work has been a worthy one, and its value, while probably not apparent in dollars and cents, can not be estimated. It lies in the germ which has been planted in the minds of those who have gone forth from your school to take a part in life's busy drama, or are elected to go forth in the future from those surroundings which you have contributed towards making beautiful, refining, valuable.

One impulse from the vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can.

Arbor day is often made a convenient season for clearing up the school grounds and yards, for repairing the walks and fences, for trimming the hedges, shrubs, and trees, and for carting off the unsightly quantities of débris always collecting thereon. Such work is always necessary, and it is better than nothing, of course, but it should be followed by some active constructive Arbor Day work, the creation of something new.

IF THE observance of Arbor Day ends with the exercises in the schoolroom, however pleasant and entertaining they may be, the real purpose of the day will not have been accomplished. There should be some practical work not only in and around the school building, but the influence must reach the home surroundings as well. In some schools in former years, every pupil has pledged himself to plant something at home, either a tree, shrub, flower, or something in the garden; and the interesting stories that could be told of the results of this work would fill a book. The true spirit of Arbor Day is the influence on the life and character of the pupils as exemplified in practical work. A love for the beautiful as well as a desire for the more useful should be cultivated, and all that pertains to material prosperity should be made prominent. It is not always the homes of the more wealthy but the homes surrounded by indications of taste, culture, and refinement that are the most attractive. These things being emphasized, the youth of our State will have better ideals and will be prepared to take higher standing as citizens of our commonwealth. Let us then make Arbor Day practical by doing some real planting and by learning something useful about trees and their relation to human life.

TWO TEACHERS AND ARBOR DAY

ONE TEACHER.

I have in mind one teacher, who a few days before Arbor Day, assigned the different parts just as they were suggested in the printed program. On Arbor Day she had a perfunctory recitation of the different selections; after this all gathered around a little hole dug in the hard ground and planted one small tree. This closed the work for the day, and the pupils felt that the principal thing about Arbor Day was that they were dismissed an hour earlier than usual. The pupil's mind unconsciously receives the thoughts of the teacher. As she thinks, so to a certain extent the pupil thinks and acts. This the teacher can not help, even if she would.

THE OTHER TEACHER.

I have in mind another teacher who very early in the spring brought to the school a few bulbs, told her pupils about them, and planted them in pots at different times. All became interested in watching for the green sprouts to appear, and in watching the daily progress of these plants until they bloomed. Gradually the pupils were interested and taught, day by day, from this little beginning about flowers. Some time before Arbor Day a few of the larger boys spaded up the plot of ground set aside for their park. This was then fertilized by materials brought from a neighboring barnyard, and on Arbor Day a number of rose bushes and choice trees were set out. Then the program was given, and the pupils felt a special interest in each selection. The work did not stop there, for the boys and girls began to ask for books giving particular instruction in caring for plants. Then some of them began to ask the teacher's help in arranging a flower garden for the home. Which teacher do you prefer to be?

AFTER ARBOR DAY

ND now we come to the most important of all—After Arbor Day. After the program has been rendered, after the trees and shrubs have been planted—what will be their fate? Is water hard to secure in your district? Will there be several long, hot, dry summer vacation months when the schoolhouse is deserted, when no one comes near to inquire into the condition of the trees planted on Arbor Day? Have trees and shrubs been planted and left to struggle for themselves, live or die, without further care?

These are but a few of the pertinent questions which the teacher must answer—and needs must answer BEFORE Arbor Day, if success is to mantle her efforts. Plans must be made for months ahead; if you begin the work, carry it through. "Not how many trees planted, but how many trees live," should be your watchword and battle cry. It is labor lost to plant trees and then abandon them to merciless climatic conditions, to become the prey of vagrant cow or horse, to die through sheer neglect. The teacher in the southland will have a greater task before him than will his northern fellow teacher,—for in the northland rainfall is more plentiful, summer exactions less rigorous, and vegetation more prolific,—but the greater renown will attach his successful efforts.

Arrange to have the janitor, a trustee, some patron, or a boy come during the summer months and water the trees and shrubs; see that stock is kept off the premises, enrich the soil, and cultivate where necessary. A portion of the money set aside to pay the regular janitor (see Sec. 1617, Subd. 7, California School Law) could be used to pay for this vacation care, if no one can be secured to do the work and do it faithfully without compensation.

Water supply, cultivation and care of trees and shrubs, AFTER ARBOR DAY, are the important factors you should look to if Arbor Day planting is to be of effect. It is difficult to decide which has the worst influence upon the pupil—a barren school ground, or dead stumps and decaying shrubs; sad monuments to a lost cause, reminders of a poorly planned campaign.

MOUNTAIN VIEW DISTRICT SCHOOL

The mellow toned little bell on the Mountain View schoolhouse, located near Forestville, in Sonoma County, calls the pupils to a naturally adorned playground. The natural arrangement of the trees gives shade in summer, affords protection from wintry blasts, and permits plenty of light to enter the busy schoolroom. From the native flag pole in the foreground Old Glory flies above this gem in Nature's setting.

HISTORIC TREES

I. CHARTER OAK.

In history we often see
The record of a noted tree.
We'll now some history pages turn
And note what trees we there discern:
And foremost of this famous band
We think the Charter Oak should stand.
We love to read the story o'er,
How Andrus came from England's shore
As governor in this new land,
And ruled it with a tyrant's hand;
How, when he came to Hartford town
Demanding with a haughty frown
The charter of the people's rights,
All suddenly out went the lights;
And e'er again they re-appeared,
The charter to their hearts endeared
Lay safely in this hollow tree,
Guard of the people's liberty.
All honor, then to Wadsworth's name,
Who gave the Charter Oak its fame.

II. LIBERTY ELM.

Another very famous tree
Was called the Elm of Liberty.
Beneath its shade the patriots bold
For tyranny their hatred told.
Upon its branches high and free
Was often hung in effigy
Such persons as the patriots thought
Opposed the freedom which they sought.
In war time, oft beneath this tree
The people prayed for victory;
And when at last the old tree fell
There sadly rang each Boston bell.

III. WASHINGTON ELM.

In Cambridge there is standing yet
A tree we never should forget;
For here, equipped with sword and gun,
There stood our honored Washington,
When of the little patriot band
For freedom's cause he took command.
Despite its age—three hundred years—
Its lofty head it still uprears;
Its mighty arms extending wide,
It stands our country's boasted pride.

IV. BURGOYNE'S ELM.

When, in spite of pride, pomp and boast,
Burgoyne surrendered with his host,
And then was brought to Albany
A prisoner of war to be,
In gratitude for his defeat,
That day, upon the city street,
An elm was planted, which they say
Still stands in memory of that day.

V. THE TREATY ELM.

Within the Quaker City's realm,
There stood the famous Treaty Elm.
Here, with its sheltering boughs above,
Good William Penn, in peace and love,
The Indians met, and there agreed
Upon that treaty which we read
Was never broken, though no oath
Was taken—justice guiding both.
A monument now marks the ground
Where once this honored tree was found.

VI. TREE FROM NAPOLEON'S GRAVE.

Within a city of the dead,
Near Bunker Hill, just at the head
Of Cotton Mather's grave, there stands
A weeping willow which fond hands
Brought from Napoleon's grave, they say,
In St. Helena, far away.

VII. THE CARY TREE.

I'll tell you of a sycamore
And how two poet's names it bore:
Upon Ohio's soil it stands,
'Twas placed there by the childish hands
Of sister poets, and is known
As Alice and Phœbe Cary's own.
One day, when little girls, they found
A sapling lying on the ground;
They planted it with tenderest care
Beside this pleasant highway, where
It grew and thrived and lived to be
To all around the Cary tree.

VIII. THE HAMILTON TREES.

In New York City proudly stand
Thirteen monarchs, lofty, grand,
Their branches tow'ring toward the sun
Are monuments of Hamilton,
Who planted them in pride that we
Had won our cause and liberty—
A tribute, history relates,
To the original thirteen States.

IX. RECITATION FOR SCHOOL.

We reverence these famous trees.
What better monuments than these?
How fitting on each Arbor Day
That we a grateful tribute pay
To poet, statesman, author, friend,
To one whose deeds our hearts commend
As lovingly we plant a tree
Held sacred to his memory;
A fresh memorial, as each year
New life and buds and leaves appear—
A living monumental tree,
True type of immortality.

—Ada Simpson Sherwood.

OME SUGGESTIONS

Decorate the schoolroom with flowers, branches of trees and greenery if possible to secure them. Use bunting, pictures of trees, birds and pretty homes to cover the walls. Write or print short and appropriate Arbor Day gems on the boards. Use the flag as one of your chief decorations above the platform.

Provide plenty of good music, if possible, and give especial emphasis to poems, quotations and to reports by the pupils. Arrange for one of your patrons to address the school on the subject.

The program should be long enough to admit of variety, but not so long as to be wearisome. Give places upon it to all the pupils. Alternate the recitations and readings and musical selections.

The following suggested program is intended simply as a guide; substitute other numbers for the ones given; shorten, lengthen, add to or take from—do what you think best to make your program attractive. Try to make things go with a snap and a vim.

After you have finished with this Arbor Day Manual put it in the school library with the other books of the district. It is to be kept for future reference.

A PROGRAM

Song—"The Planting Song."

Salute to the Flag—By the pupils standing and giving in concert: "I pledge allegiance to my flag and to the republic for which it stands. One nation, indivisible, with liberty and justice for all."

Reading—(*a*) The Origin and History of Arbor Day.
(*b*) President Roosevelt's Message to the School Children of the United States.

Remarks—By the Teacher.
What Arbor Day means to pupils and patrons. Effect of the work on future citizenship and progress. What has been done in the past. Needs of the district to carry on work; fences; water supply; summer care; paint; coöperation. See "With the Teacher" and "After Arbor Day."

Recitation—(*a*) "Plant a Tree."
(*b*) "Our Three Favorites."

Song of Dedication—"An Arbor Day Tree."

Dialogue—(*a*) "The Trees and the Seasons."
(*b*) "What the Trees Teach Us."

Essay—(*a*) The State Flower of California.
(*b*) State and National Flowers.
(*c*) What We Owe to the Trees.
(*d*) Our Most Useful Trees.

Recitation—(*a*) "Woodman, Spare That Tree."
(*b*) "Three Trees."
Dialogue—(*a*) "Which Shall It Be?"
(*b*) "Why We Keep Arbor Day."
Song—"Arbor Day."
Reading—(*a*) "A Wonderful Tree."
(*b*) "From the Forest."
Roll Call—Each pupil to rise at call of his name and give a quotation suited to Arbor Day.
Recitation and Pantomime—"Three Little Trees."
Recitation—"Historic Trees." By nine pupils.
Song—"Arbor Day March."
Address by a speaker chosen for the occasion. (Patron, trustee, clerk of school board, minister, county superintendent, or other speaker.)
Song—"Springtime."
Closing Remarks by the Teacher.
Song—"America." Audience and school standing.

(NOTE.—Several selections are given for each recitation, reading and dialogue; choose the one best adapted to your pupils and if necessary rearrange the order in which the different numbers come. A short GOOD program is much more effective than a poor long one. A thing not done well is better not done at all.)

ISTORY OF ARBOR DAY

Once a year, on Arbor Day, we talk and sing about the trees; but do we all the year keep the spirit of reverence of these comrades of the forest, guarding the life we can not give again? In some European countries the man who cuts down a tree must plant ten trees: and wisely enough, because in the chances of the woods, many trees die for one that prospers. Would it not be well for us Americans to offer hostage to the future by thus seeding the ground we desolate? And would it not also be well for us to act as guardians to the fine old trees already growing green and goodly about us—to see that they are pruned and patched, if necessary? for the tree doctor can now fill a hole in a tree to check decay, as the dentist fills a hole in a tooth. Improvement Clubs and Good Government Clubs could lessen the wanton destruction of noble trees by judicious expostulation with the axman, or by crossing his palm with a few persuasive dollars—dollars that would count as an alms to posterity.

We are told that the custom of tree planting is an old one among the Germans, who in the rural districts practice a commendable habit of

having each member of the family plant a tree at Whitsuntide, which comes forty days after Easter. The old Mexican Indians also plant trees on certain days of the years when the moon is full, naming them after their children; and the ancient Aztecs are said to have planted a tree every time a child was born, giving it the name of the child.

But to the Hon. J. Sterling Morton of Nebraska, Secretary of Agriculture in President Cleveland's cabinet, belongs the honor of instituting our American Arbor Day. Julius Sterling Morton was born in Jefferson County, New York, April 22, 1832. He was of Puritan stock, his ancestors having come from England on the Little Ann, the first ship after the Mayflower. His parents removed to Michigan when the son was still a baby. He was sent to good private schools and seminaries, and later to Michigan University, but was graduated at Union College, New York, in 1854. Immediately after completing his college course he married and removed to Nebraska, and in the following year chose Nebraska City as his permanent home, locating upon a claim half a mile square, adjacent to the town. This estate grew into the beautiful Arbor Lodge, so familiar to all lovers of the holiday founded by Mr. Morton. It was home for the remainder of his life.

It was at an annual meeting of the Nebraska State Board of Agriculture, held in the city of Lincoln, January 4, 1872, that Mr. Morton introduced the following resolution:

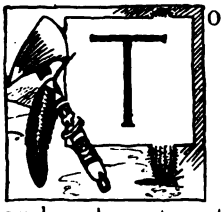
Resolved, That Wednesday, the 10th day of April, 1872, be and the same is hereby especially set apart and consecrated for tree planting in the state of Nebraska, and the State Board of Agriculture hereby name it Arbor Day, and to urge upon the people of the state the vital importance of tree planting, hereby offer a special premium of one hundred dollars to the agricultural society of that county in Nebraska which shall upon that day plant properly the largest number of trees; and a farm library of twenty-five dollars worth of books to that person who on that day shall plant properly in Nebraska the greatest number of trees.

The resolution was unanimously adopted. A second resolution was likewise adopted, asking the newspapers of the state to keep the matter constantly before the people until the appointed day; and the result was the planting of over a million trees in Nebraska on this first Arbor Day.

From this beginning on that western prairie the movement has spread in an ever widening circle, whose circumference to-day sweeps from the Atlantic to the Pacific.

PROCLAMATION OF THE PRESIDENT TO THE SCHOOL CHILDREN OF THE UNITED STATES.

[This letter from the President of the United States would be a fine thing for one of the older pupils to deliver slowly, thoughtfully, earnestly as an oration; or four pupils could give it, one paragraph for each.]



O THE SCHOOL CHILDREN OF THE UNITED STATES:

Arbor Day (which means simply "Tree Day") is now observed in every State in our Union—and mainly in the schools. At various times from January to December, but chiefly in this month of April, you give a day or part of a day to special exercises and perhaps to actual tree planting, in recognition of the importance of trees to us as a Nation, and of what they yield in adornment, comfort, and useful products to the communities in which you live.

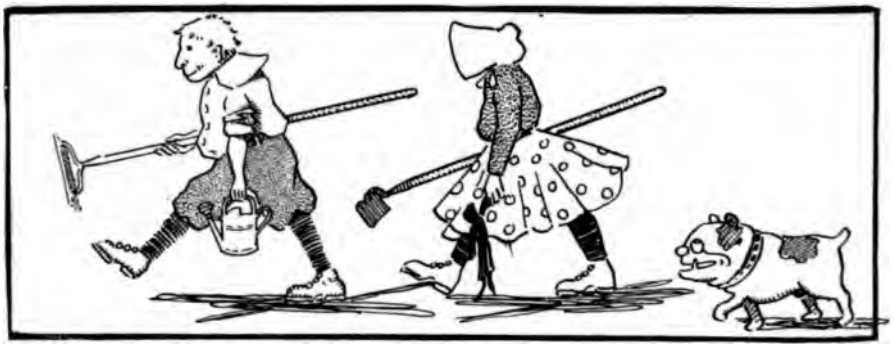
It is well that you should celebrate your Arbor Day thoughtfully, for within your lifetime the Nation's need of trees will become serious. We of an older generation can get along with what we have though with growing hardship; but in your full manhood and womanhood you will want what nature once so bountifully supplied and man so thoughtlessly destroyed; and because of that want you will reproach us, not for what we have used, but for what we have wasted.

For the nation as for the man or woman and the boy or girl, the road to success is the right use of what we have and the improvement of present opportunity. If you neglect to prepare yourselves now for the duties and responsibilities which will fall upon you later, if you do not learn the things which you will need to know when your school days are over, you will suffer the consequences. So any nation which in its youth lives only for the day, reaps without sowing, and consumes without husbanding, must expect the penalty of the prodigal, whose labor could with difficulty find him the bare means of life.

A people without children would face a hopeless future; a country without trees is almost as hopeless; forests which are so used that they can not renew themselves will soon vanish, and with them all their benefits. A true forest is not merely a storehouse full of wood, but, as it were, a factory of wood, and at the same time a reservoir of water. When you help to preserve our forests or to plant new ones you are acting the part of good citizens. The value of forestry deserves, therefore, to be taught in the schools, which aim to make good citizens of you. If your Arbor Day exercises help you to realize what benefits each one of you receives from the forests, and how by your assistance these benefits may continue, they will serve a good end.

THEODORE ROOSEVELT.

The White House.



PROGRAM HINTS AND HELPS

SOME FAMOUS TREES

Certain of the pupils can find information relating to the famous trees mentioned below, and either recite a bit of verse or prose, or write a short, interesting paper. Descriptions may be given of the trees as an answer to roll call.

1—The California Big Trees.
2—The Treaty Elm of Philadelphia.
3—The Liberty Elm of Boston.
4—Washington's Elm at Cambridge.
5—The Charter Oak of Hartford.
6—The Hamilton Trees of New York.
7—The Tree from Napoleon's Grave.
8—The Cary Sycamore.
9—The Apple Tree of Appomattox.
10—Shakespeare's Mulberry Tree.
11—The Banyan Tree of India.
12—Burgoyne's Elm.
13—The Cedars of Mt. Lebanon.
14—Arnold's Willow near West Point.
15—Magnolia Council Tree, Charleston, S. C.
16—The Cypress Tree of Montezuma.

SELECTIONS

Treaty Elm, the great elm tree beneath the shade of whose branches William Penn stood when he made his famous treaty with nineteen tribes of Indians.

Liberty Elm at Boston is another of the famous elm trees; it was planted and dedicated by a schoolmaster to the independence of the colonies, and was the rallying point for patriots before, during and after the Revolutionary War.

The Freedman's Oak, or Emancipation Oak, at Hampton, Virginia, sheltered the slaves of the region when they first heard read President Lincoln's Emancipation Proclamation.

The Cary Tree planted by Alice and Phœbe Cary in 1832; a large and beautiful sycamore seen from the Hamilton turnpike in Ohio.

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Upon that treaty which we read
Was never broken, though no oath
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Of Cotton Mather's grave, there stands
A weeping willow which fond hands
Brought from Napoleon's grave, they say,
In St. Helena, far away.

VII. THE CARY TREE.

I'll tell you of a sycamore
And how two poet's names it bore;
Upon Ohio's soil it stands,
'Twas placed there by the childish hands
Of sister poets, and is known
As Alice and Phœbe Cary's own.
One day, when little girls, they found
A sapling lying on the ground;
They planted it with tenderest care
Beside this pleasant highway, where
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To all around the Cary tree.

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Thirteen monarchs, lofty, grand,
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Held sacred to his memory;
A fresh memorial, as each year
New life and buds and leaves appear—
A living monumental tree,
True type of immortality.

—Ada Simpson Sherwood.

THE STATE FLOWER

Thy satin vesture richer is than looms
Of Orient weave for raiment of her kings;
Not dyes of olden Tyre, not precious things
Regathered from the long-forgotten tombs
Of buried empires, not the Iris plumes
That wave upon the tropic's myriad wings,
Not all proud Sheba's queenly offerings,
Could match the golden marvel of thy blooms.

—Ina D. Coolbrith.

THE GOLDEN POPPY

Russian and German scientists in the year 1818 found the Golden Poppy of California, and one of them named it after his friend Dr. Johann Frederick Eschscholtz (*Eschscholtzia Californica*).

The Golden Poppy, as it is commonly called, has anything but an agreeable perfume, but its wonderful coloring, and its incomparable, satin-like sheen, have been the wonder, delight, and admiration of all lovers of nature. Growing, as it does, throughout the length and breadth of the State, and hardly elsewhere, it is peculiarly typical of California, and in 1903, under an Act of the Legislature, was made the State Flower. It blooms in the greatest profusion from February until May, though specimens of the flower can be had in the lower valleys of California almost any day in the year. In the flood tide of its season, when this matchless flower raises itself above the feathery green foliage of the plant, which is tipped with a deep bronze-red, it covers acres upon acres of plains and mesas, and presents a sight which once seen is never forgotten.

The California Poppy is a brazen, garish flower. It shuns the woodland, and unsheltered, fairly revels in the warm sunlight. It possesses none of the modesty of the violet, the sweetness of the rose, nor the beauty of the lily, but, standing alone and unique, it compels our admiration because of its wonderful coloring and sheen, which refuse to be transferred by the limner's art to board or canvas. It wins its place by its transcendent beauty, and lovers of nature, having once reveled therein, the memory of it lives a lifetime.

O, Golden Poppy, Eschscholtzia, Flame Flower, La Amapola, Copa de Oro!—Cup of Gold! You are all one and the same. Born under cloudless sky; child of the summer sun and earth's unminted gold: inimitable; sans story, sans art, sans poetry, sans perfume, sans all, save thy golden glory—we love you!—*Prentiss Maslin.*

THE GOLDEN POPPY, OR ESCHSCHOLTZIA CALIFORNICA,
THE STATE FLOWER OF CALIFORNIA.

THE NEW YORK
PUBLIC LIBRARY

ASTOR, LENOX AND
TILDEN FOUNDATIONS

iwatha's Sailing as given in Longfellow's wonderful "Hiawatha"—ling the Birch Canoe—is an excellent selection to arouse interest to Arbor Day. Read aloud to the pupils it is probably more ive than when read by them and should be followed by a general ssion of the various trees mentioned.

STATE FLOWERS

do—Blue and White Columbine
ia—Cactus
a—Cherokee Rose
s—Sunflower
gan—Apple Blossom
sota—Moccasin Flower
a—Sage Brush
i—Oregon Grape
mt—Red Clover
California—Golden Poppy
Delaware—Peach Blossom
Idaho—Syringea
Maine—Pine Cone and Tassel
Montana—Bitter Root
Nebraska—Goldenrod
Oklahoma—Mistletoe
Utah—Sego Lily
Washington—Rhododendron

NATIONAL FLOWERS

a—Sugar Maple
—Narcissus
ad—Rose
e—Flower-de-luce
ny—Cornflower
—Violet
Japan—Chrysanthemum
Prussia—Linden
Saxony—Mignonette
Scotland—Thistle
Spain—Pomegranate
Holland—Orange and Tulip

ARBOR DAY SONGS WITH FAMILIAR AIRS

ARBOR DAY.

By Seymore S. Short.

(Air: "My Maryland.")

Again we come this day to greet,
Arbor Day, sweet Arbor Day,
With willing hands and nimble feet,
Arbor Day, sweet Arbor Day.

No sweeter theme our time can claim,
No grander deed points us to fame,
No day more proud than this we name,
Arbor Day, dear Arbor Day.

Bring forth the trees. Prepare the earth
For Arbor Day, sweet Arbor Day.
With song we celebrate the birth
Of Arbor Day, sweet Arbor Day.

And when our joyful task is done,
And we our meed of praise have won,
The glorious works but just begun,
For Arbor Day, dear Arbor Day.

SONG OF DEDICATION

AN ARBOR DAY TREE.

(Air: "Columbia, the Gem of the Ocean.")

The tree we are planting on this day
Is chosen with tenderest care;
May beauty adorn it, hereafter,
And clothe it with usefulness rare.
May green leaves appearing each springtime
Be leaves of a fair book of fame,
And spread to the breezes the story
Extolling the new-given name.

The tree is an emblem of greatness,
As, springing from one tiny seed,
It mounts ever upward and onward,
An emblem of greatness, indeed.
The birds sing its praises to others,
The winds carry swiftly the tale,
The tree is the monarch of the forest,
Of hill, valley, greenwood and dale.

THE PLANTING SONG.

BY DR. S. F. SMITH, AUTHOR OF "AMERICA."

(Air: "America.")

Joy for the sturdy trees
Fanned by each fragrant breeze,
Lovely they stand.
The song birds o'er them thrill,
They shade each tinkling rill,
They crown each swelling hill,
Lowly or grand.

Plant them by stream or way,
Plant where the children play,
And toilers rest.
In every verdant vale,
On every sunny swale—
Whether to grow or fail,
God knoweth best.

Select the strong, the fair,
Plant them with earnest care
No toil is vain.
Plant in a fitter place,
Where, like a lovely face,
Set in some sweeter grace,
Change may prove gain.

God will his blessings send,
All things on him depend.
His loving care.
Clings to each leaf and flower,
Like ivy to its tower.
His presence and His power
Are everywhere.

ARBOR DAY MARCH.

BY ELLEN BEAUCHAMP.

(Air: "Marching Through Georgia.")

Celebrate the Arbor Day
With march and song and cheer.
For the season comes to us
But once in every year;
Should we not remember it
And make the mem'ry dear;
Memories sweet for Arbor Day.

Flow'rs are blooming all around,
Are blooming on this day;
And the trees with verdure clad,
Welcome the month of May,
Making earth a garden fair
To hail the Arbor Day,
Clothing all nature with gladness.

Chorus:

Hurrah! Hurrah! The Arbor Day is here;
Hurrah! Hurrah! It gladdens every year,
So we plant a young tree on blithsome Arbor Day,
While we are singing for gladness.

SPRINGTIME.

BY ELLEN BEAUCHAMP.

(Air: "Auld Lang Syne.")

The winter storms have passed away,
And springtime now is here
With sunshine smiling all around,
And heavens blue and clear.
The gifts of nature brighten earth,
And Nature her garden gay;
They give us a cheery greeting bright
On this, the Arbor Day.

The birds with gladsome voices sing
Each its melodious lay,
And music swells each little throat
On this, the Arbor Day.
The trees put forth their greenest leaves
On this, the Arbor Day.
And welcome now the chosen tree
Which we shall plant to-day.

"The Brave Old Oak" is an excellent song for the Arbor Day program.

PLANT A TREE.

He who plants a tree,
Plants a hope.
Rootlets up through fibres blindly grope;
Leaves unfold into horizons free.
So man's life must climb
From the clods of time
Unto heavens sublime.
Canst thou prophesy, thou little tree,
What the glories of thy boughs shall be?

He who plants a tree,
Plants a joy;
Plants a comfort that will never cloy.
Every day a fresh reality.
Beautiful and strong,
To whose shelter throng,
Creatures blithe with song.
If thou couldst but know, thou happy tree,
Of the bliss that shalt inhabit thee.

He who plants a tree,
He plants youth;
Vigor won for centuries in sooth;
Life of time, that hints eternity!
Boughs their strength uprear,
New shoots every year
On old growths appear.
Thou shalt teach the ages, sturdy tree,
Youth of soul is immortality.

He who plants a tree,
He plants peace.
Under its green curtains jargons cease,
Leaf and zephyr murmur soothingly,
Shadows soft with sleep
Down tired eyelids creep,
Balm of slumber deep.
Never hast thou dreamed, thou blessed tree,
Of the benediction thou shalt be.

He who plants a tree,
He plants love;
Tents of coolness spreading out above
Wayfarers, he may not live to see.
Gifts that grow are best;
Hands that bless are blest;
Plant; life does the rest.
Heaven and earth help him who plants a tree,
And his work its own reward shall be.

—*Lucy Larcom.*

THE TREES AND THE SEASONS

(For four little girls or two little girls and two little boys; if possible have the first dressed in green, the second in yellow, the third in brown and the last one in white, each carrying a wreath or branch typical of the season mentioned.—L. C.)

First Child—

I love a tree in spring
When the first green leaves come out
And the birds build their nests and carol
Their sweet songs round about.

Second Child—

I love a tree in summer,
When in the noontide heat,
The reapers lie in its shadow
On the greensward cool and sweet.

Third Child—

I love a tree in autumn,
When Frost, the painter old,
Has touched with his brush its branches,
And left them all crimson and gold.

Fourth Child—

I love a tree in winter,
Mid snow and ice and cloud,
Waving its long, bare branches,
In the north wind, wailing loud.

All—

Let us plant a tree by the wayside,
Plant it with smiles and with tears,
A shade for some weary wanderer,
A hope for the coming years.

A WONDERFUL TREE

Did you ever hear of a tree bearing glue, towels, cloth, tinder and bread? There is just such a wonder; it is found on the Pacific Islands, and is called the bread fruit tree.

It is about as tall as a three-story house, and the branches come out straight from the tree like so many arms. They are covered with leaves nearly two feet long and deeply gashed at the edges, while half hidden among them are the fruits, growing like apples on short stems, but larger and having a thick, yellow rind.

This fruit is like bread, and it is in season during eight months of the year, the natives finding a good living in it. They gather it while it is green, and bake it in an oven. Scraping off its outer blackened crust, they come to the loaf, which is very much like nice white bread; but it must be eaten soon after baking, else it grows harsh and loses its pleasant taste.

As for glue, it oozes from the trunk of the tree and is found useful for many purposes; the leaves make excellent towels for the few natives who care to use them, and from the inner bark of the tree a kind of coarse cloth can be made. Besides this its dried blossoms are used for tinder in lighting fires, and the wood is in great demand for building purposes.

With a few of these wonderful trees in the front yard, housekeeping ought to be an easy matter.

FROM THE FOREST

About sixty per cent of all our railroad ties are made of white oak; nearly twenty per cent are pine. Since every mile of railway needs about 2,500 ties and there are over 200,000 miles of such roads in our country, it takes millions of acres of timber to supply a single set of ties. Such a set has to be replaced about every seven years. Thus it is that the railways rank among the greatest consumers of wood in the country.

Our telegraph and telephone poles are made largely from hemlock and cedar. The price paid for such timber varies from two to ten dollars per pole.

Flour barrels are made largely from elm. Barrels for liquids from a fine grade of white oak; also ash and elm.

Our furniture is made from walnut, ash, oak, maple and other hard woods.

White oak and hickory are used in manufacture of wagon and buggy wheels.

Soft woods, as poplar, aspen, spruce, pine and basswood, are used in the manufacture of paper such as is used in newspapers, note books, etc.

Three fourths of our lumber is made from soft woods, such as redwood, white pine, spruce and hemlock. The great pineries of Wisconsin, Minnesota and Michigan supply our white pine, the most useful timber in the north temperate zone, because it is in greatest demand for building purposes.

The bark of the tanbark oak tree is used in the tanning of leather.

Corks are made from the bark of the cork oak, which grows only in the Mediterranean countries and Portugal.

As a national industry, forestry stands second only to agriculture in number of people and amount of capital employed and in value of product. It has been estimated that we have five hundred million acres of growing forest, and that thirty-five cubic feet of wood are produced annually per tree.

WHAT THE TREES TEACH US

(An exercise for using fourteen pupils of the lower grade; less than this number may be used by omitting certain verses. If each pupil carries a branch of the tree represented the effect is greatly enhanced.)

First Pupil—
I am taught by the Oak to be rugged and strong
In defense of the right; in defiance of wrong.

Second Pupil—
I have learned from the Maple, that beauty to win
The love of all hearts, must have sweetness within.

Third Pupil—
The Beech, with its branches wide-spreading and low.
Awakes in my heart hospitality's glow.

Fourth Pupil—
The Pine tells of constancy. In its sweet voice
It whispers of hope till sad mortals rejoice.

Fifth Pupil—
The nut bearing trees teach that 'neath manners gruff,
May be found as "sweet kernels" as in their caskets rough.

Sixth Pupil—
The Birch, in its wrappings of silver gray,
Shows that beauty needs not to make gorgeous display.

Seventh Pupil—
The Ash, having fibres tenacious and strong,
Teaches me firm resistance, to battle with wrong.

Eighth Pupil—
The Aspen tells me with its quivering leaves,
To be gentle to every sad creature that grieves.

Ninth Pupil—
The Lombardy Poplars point upward, in praise,
My voice to kind heaven they teach me to raise.

Tenth Pupil—
The Elm teaches me to be pliant yet true;
Though bowed by rude winds, it still rises anew.

Eleventh Pupil—
I am taught generosity, boundless and free,
By the showers of fruit from the dear Apple tree.

Twelfth Pupil—
The Cherry tree blushing with fruit crimson red,
Tells of God's free abundance that all may be fed.

Thirteenth Pupil—
In the beautiful Linden, so fair to the sight,
This truth I discern: It is inwardly white.

Fourteenth Pupil—
The firm rooted Cedars like sentries of old,
Show that virtues deep-rooted may also be bold.

—*Helen O. Hoyt*, in the Teachers' World.

"When the Green Gits Back in the Trees" is an excellent selection in verse by James Whitcomb Riley. It is in dialect and could be recited by a pupil of the grammar grade.

WHY WE KEEP ARBOR DAY

(Group the six children upon the stage; seventh child stands at one side; each child wears a crown of leaves.)

Child at the side—

Trees of the fragrant forest,
With leaves of green unfurled,
Through summer's heat, through winter's cold,
What do you do for our world?

First—

Our green leaves catch the raindrops
That fall with soothing sound,
Then drop slowly, slowly down,
'Tis better for the ground.

Second—

When rushing down the hillside,
A mighty freshet forms,
Our giant trunks and spreading roots
Defend our happy homes.

Third—

From burning heat in summer,
We offer cool retreat,
Protect the land in winter's storm
From cold, and wind, and sleet.

Fourth—

Our falling leaves in autumn,
By breezes turned and tossed,
Will make a deep sponge carpet warm
Which saves the ground from frost.

Fifth—

We give you pulp for paper,
Our fuel gives you heat,
We furnish lumber for your homes,
And nuts and fruits to eat.

Sixth—

With strong and graceful outline,
With branches green and bare,
We fill the land all through the year
With beauty everywhere.

All, in concert—

So, listen, from the forest,
Each one a message sends
To children on this Arbor Day,
"We trees are your best friends."

—*Primary Education*

OUR THREE FAVORITES

The oak is a strong and stalwart tree,
And it lifts its branches up
And catches the dew right gallantly
In many a dainty cup.
But the world is brighter and better made,
Because of the woodman's stroke,
Descending in the sun or falling in shade,
On the sturdy form of the oak.

The elm is a kindly, good tree,
With its branches bending low;
The heart is glad when its form we see,
As we list to the river's flow.
Ay! the heart is glad and the pulses bound,
And joy illumines the face
Whenever the goodly elm is found,
Because of its beauty and grace.

The maple is supple, and lithe, and strong,
And claimeth our love anew,
When the days are listless, and quiet and long,
And the world is fair to view.
And later—as the beauties and graces unfold—
A monarch right royally drest,
With streamers aflame and pennons of gold,
It seems of all the best.

WHICH SHALL IT BE?

FOR FOUR JOLLY BOYS.

First—

If we are all to choose and say
What trees we'd like to plant to-day,
Seems to me none can be
Half so good as a Christmas tree!
For surely even a baby knows
That's where the nicest candy grows.
Candy on a Christmas tree.
That's what pleases me!

Second—

Planted out, 'twould never bear—
But, after all, why should we care?
The richest thing is what we bring
From sugar maples in the spring;
So now I'll set a maple here,
For feast and frolic every year.
Sugar from a maple tree,
That's what pleases me!

Third—

Sweets are good most any day,
But as for trees, I'm bound to say,
A shag-bark tall is best of all
When once the nuts begin to fall;
And so a hickory tree I'll set,
And piles of fun and nuts I'll get.
Nuts from a hickory tree,
That's what pleases me!

Fourth—

I shall plant an apple tree,
That's the best of all for me;
And each kind to suit my mind,
On this one with grafts I'll bind,
Ripe or green the whole year through,
Pie or dumpling, bake or stew.
Every way I like them best,
And I'll treat the rest!

—*Youth's Companion.*

ESSAYS

Generally there are to be found in the upper grades pupils especially gifted in writing essays or descriptive articles. Have two or three select topics from the following list, write their articles at home, and when they have been submitted to you select the best to be read as a part of the Arbor Day program:

1. The Big Trees of California.
2. Our State Flower—The Golden Poppy.
3. What We Owe to the Trees.
4. Famous Trees and Little Stories About Them.
5. The Fruit Trees of California.
6. Our Most Useful Trees and Their Products.
7. What the Redwood Told the Oak.
8. The Life of the Oak Tree—Told by Himself.
9. The History of Arbor Day.
10. Trees: The Home of the Birds and Their Nests.
11. The Most Beautiful Tree.
12. How the Tree Breathes and Grows.

"Woodman, Spare That Tree," by George P. Morris, should be recited on Arbor Day as part of the regular program.

Some afternoon before Arbor Day comes around read the "Talking Oak," by Tennyson, to your pupils. You'll find it worth while.

RESPONSIVE READING

TEACHER: And God said, Let the earth bring forth the fruit-tree yielding fruit after its kind.

SCHOOL: And the earth brought forth the tree, yielding fruit whose seed was in itself after its kind. And God saw that it was good.

TEACHER: And God said, Behold I have given you every tree in the field which is the fruit of a tree yielding seed; to you it shall be for meat.

SCHOOL: And the Lord planted a garden eastward in Eden, and there put the man whom he had formed. And out of the ground made the Lord God to grow every tree that is pleasant to the sight and good for food.

WHEN THE GREEN GITS BACK IN THE TREES

In the spring when the green gits back in the trees,
  And the sun comes out and stays,
And your boots pull on with a good tight squeeze,
  And you think of your barefoot days:
When you ort to work and when you want not,
  And you and your wife agrees
It's time to spade up the garden lot—
  When the green gits back on the trees,
  Well, work is the least of my ideas
When the green, you know, gits back on the trees

When the whole tail feathers o' winter time
  Is all pulled out and gone,
And the sap it thaws and begins to climb,
  And the sweat it starts out on
A feller's fored a-gittin' down
  At the old spring on his knees—
I kind o' like, jes, a loaferin' roun'
  When the green gits back in the trees—
  Jes' a-potterin' roun' as I darn please,
When the green, you know, gits back in the trees.

—*James Whitcomb Riley.*

SUBJECTS FOR ARBOR DAY CONSIDERATION

History of Arbor Day. Varieties of trees in California and on our farms. Trees and their relation to birds. Trees and their relation to rainfall. Best trees to plant on the roadside. The most useful trees. How to care for them. Best trees and shrubs for home planting. Schoolhouses: proper interiors and exteriors. School grounds: how to improve them. How to do away with rubbish on the roadside. How to make Arbor Day most useful.

THREE LITTLE TREES

(Recitation for a tiny girl. Three other children stand near representing the trees—laughing, whispering, telling secrets, clapping hands, etc., in pretty pantomime to the speaker's words.)

Way out on the orchard in sunshine and breeze,
A-laughing and whispering, grew three little trees.

And one was a plum tree, and one was a pear,
And one was a rosy-cheeked apple tree rare.

A dear little secret, as sweet as could be,
The breeze told one day to the glad apple tree.

She rustled her little green leaves all about,
And smiled at the plum, and the secret was out.

The plum told in whispers the pear by the gate,
And she told it to me, so you see, it came straight.

The breeze told the apple, the apple the plum,
The plum told the pear, "Robin Redbreast has come!"

And out in the orchard they danced in the breeze,
And clapped their hands softly, these three little trees.

Hail to the Trees:
Patient and generous, mothers of mankind;
Arching the hills, the minstrels of the wind,
Spring's glorious flowers and Summer's balmy tents.
As sharers in man's free and happier sense,
The trees bless all, and then brown mantled, stand,
The sturdy prophets of a golden land.

A little of thy steadfastness,
Rounded with leafy gracefulness,
Old Oak, give me—
That the world's blasts may round me blow,
And I yield gently to and fro,
While my stout-hearted trunk below
And firm set roots unshaken be.
—*Lowell.*

CONCERT EXERCISE FOR LITTLE FOLKS

FACTS ABOUT ARBOR DAY.

1. We will remember Arbor Day, for it means tree day.
2. We plant trees on Arbor Day.
3. We little children can not plant large trees, but we can plant seeds.
4. We sing about the flowers and trees on Arbor Day.
5. We speak pieces about the trees, too.
6. We learn wonderful things about the trees.
7. Trees protect us from the fierce winds.
8. We could have no fires if there were no trees. We get our coal and wood from trees.

Many of our houses are made of trees.
Some people have nothing to eat but the fruit from trees.
We know we could not live without trees.
Trees keep the air pure, and we must have pure air to breathe.
After a rainstorm, the millions of leaves and stems and roots he tiny drops a long time.
This prevents drouths and keeps the earth moist so plants can

It rains more in places where trees grow.
If it did not rain there would be no springs; there would be no s, lakes, and rivers.
Our earth would be like a hot, dry desert without trees.
We will cut down only the trees we need for use.
Trees are among the best friends we have.
(All) We will love the beautiful trees.

—*Ed. Journal.*

THREE TREES

The pine tree grew in the wood,
Tapering, straight, and high;
Stately and proud it stood,
Black green against the sky.
Crowded so close, it sought the blue,
And ever upward it reached and grew.

The oak tree stood in the field,
Beneath it dozed the herds;
It gave to the mower a shield,
It gave a home to the birds.
Sturdy and broad, it guarded the farms,
With its brawny trunk and knotted arms.

The apple tree grew by the wall,
Ugly and crooked and black;
But it knew the gardener's call,
And the children rode on its back.
It scattered its blossoms upon the air,
It covered the ground with fruitage fair.

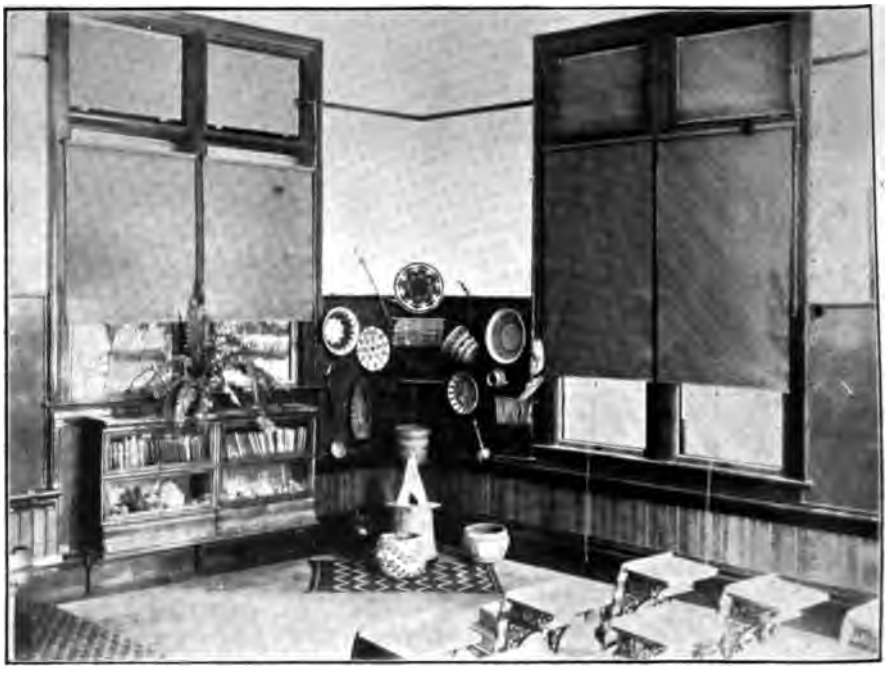
"Now, hey," said the pine, "for the wood!
Come live with the forest band.
Our comrades will do you good,
And tall and straight you will stand."
And he swung his boughs to a witching sound,
And flung his cones like coins around.

"O ho!" laughed the sturdy oak;
"The life of the field for me.
I weather the lightning stroke;
My branches are broad and free,
Grow straight and slim in the wood if you will,
Give me the sun and the wind-swept hill."

And the apple tree murmured low:
" I am neither straight nor strong;
Crooked my back doth grow
With bearing my burdens long."
And it dropped its fruit, as it dropped its tear.
And reddened the ground with fragrant cheer.

And the Lord of the Harvest heard,
And he said: " I have use for all;
For the bough that shelters a bird,
For the beam that pillars a hall;
And grow they tall, or grow they ill,
They grow but to wait their master's will."

So a ship of oak was sent,
Far over the ocean blue;
And the pine was the mast that bent,
As over the waves it flew;
And the ruddy fruit of the apple tree
Was borne to a starving isle of the sea.



A pretty corner in a schoolroom, showing how a plant may be used to an advantage. The bit of green adds beauty to the room and affords rest for tired little eyes.

THE LITTLE PLANT

In my little garden bed
  Raked so nicely over,
First the tiny seeds I sow,
  Then with soft earth cover.

Shining down, the great round sun
  Smiles upon it often;
Little raindrops pattering down,
  Help the seeds to soften.

Then the little plant awakes!
  Down the roots go creeping,
Up it lifts its little head
  Through the brown mold peeping.

High and higher still it grows
  Through the summer hours,
Till some day the happy buds
  Open into flowers.

GEMS OF THOUGHT FOR ARBOR DAY

The following selected gems are suitable as answers to roll call; may be made part of an essay; may be recited; written or printed on the blackboard with colored chalks; or any use to which a live teacher sees fit to put them.

In freedom's air we plant the tree,
  Our land of hope, America;
Beneath the blue sky, freedom's dome,
Within the green earth, freedom's home,
We plant the tree for years to come,
  And pray, God bless America.

—*Butterworth.*

Dear little tree that we plant to-day,
What will you be when we're old and gray?
  "The savings bank of the squirrel and mouse,
  For robin and wren an apartment house,
The dressing-room of the butterfly's ball,
The locust's and katydid's concert hall,
  The schoolboy's ladder in pleasant June,
  The schoolgirl's tent in the July moon,
And my leaves shall whisper them merrily,
A tale of the children who planted me."

—*Youth's Companion.*

Our years, our schoolhouse yards, and the resting places of our dead, should not be neglected, but should be adorned with nature's own beautifiers—the trees.—*Bates.*

The tall oak, towering to the skies,
The fury of the wind defies,
From age to age, in virtue strong,
Inured to stand and suffer wrong.

What earnest worker, with hand and brain, for the benefit of his fellowmen, could desire a more pleasing recognition of his usefulness than the monument of a tree, ever growing, ever blooming, and ever bearing wholesome fruit?—*Irving.*

Summer or winter, day or night,
The woods are an ever new delight;
They give us peace, and they make us strong,
Such wonderful balms to them belong;
So, living or dying, I'll take mine ease,
Under the trees, under the trees.
—*Stoddard.*

I shall speak of the trees as we see them, love them, adore them, in the fields where they are alive, holding their green sunshades over our heads, talking to us with their hundred thousand whispering tongues, looking down on us with that sweet meekness which belongs to huge but limited organism—which one sees most in the patient posture, the outstretched arms and the heavy drooping robes of these vast beings, endowed with life, but not with soul—which outgrow us and outlive us, but stand helpless, poor things—while nature dresses and undresses them.—*Holmes.*

There isn't a blossom under our feet
But has some teaching short and sweet
That is richly worth the knowing.

When we plant a tree we are doing what we can to make our planet a more wholesome and happier dwelling place for those who come after us, if not for ourselves. *Oliver Wendell Holmes.*

Give fools their gold and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all.
—*Whittier.*

He who plants a tree,
He plants love;
Tents of coolness spreading out above
Wayfarers, he may not live to see
Gifts that grow are best,
Hands that bless are blest;
Plant; life does the rest.
Heaven and earth help him who plants a tree,
And his work its own reward shall be.
—*Larcom.*

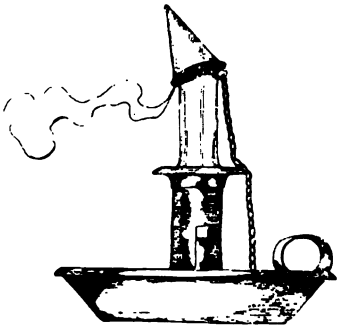
The tree planter and teacher united in one shall be declared the best benefactor of modern times—the chief provider for posterity.—*Morton.*

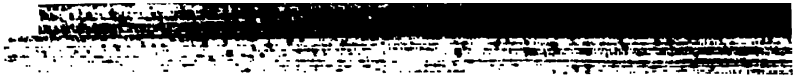
The man who builds does a work which begins to decay as soon as he is done, but the work of the man who plants trees grows better and better, year after year, for generations.

To avert treelessness; to improve the climatic conditions; for the sanitation and embellishment of home environments; for the love of the beautiful and useful combined in the music and majesty of a tree, as fancy and truth unite in an epic poem, Arbor Day was created.

The planting of a tree, the tender care bestowed upon it, the eager watching for new developments in its growth, the tending of a flower bed, the training of a vine, will for many a child prove the "open sesame" into the charmed circle of those forces and factors of the natural world which purify, refine, and ennoble the heart of man.—*Mull.*

When we plant a tree we are doing what we can to make our planet a more wholesome and happier dwelling place for those who come after us, if not for ourselves. As you drop the seed, as you plant the sapling your left hand hardly knows what your right hand is doing. But Nature knows, and in due time the Power that sees and works in secret will reward you openly.—*Holmes.*





STATE OF CALIFORNIA

OFFICE SUPERINTENDENT OF PUBLIC INSTRUCTION

TABULAR STATEMENTS

SHOWING CONDITION OF

STATE NORMAL SCHOOLS, CALIFORNIA POLYTECHNIC SCHOOL, THE CALIFORNIA INSTITUTION FOR THE DEAF AND THE BLIND, HIGH SCHOOLS, PRIMARY AND GRAMMAR SCHOOLS, KINDERGARTEN AND NIGHT SCHOOLS

1907-1908

FROM THE

TWENTY-THIRD BIENNIAL REPORT

EDWARD HYATT

SUPERINTENDENT OF PUBLIC INSTRUCTION

SACRAMENTO, CALIFORNIA

PRINTED AT THE STATE PRINTING OFFICE
W. W. SHANNON, SUPERINTENDENT

INTRODUCTION.

By the Superintendent of Public Instruction.

This statistical report has been shorn of many details common to such documents. It undertakes to give the live, essential, general facts that are of real use and interest; and to omit the cumbersome and confusing mass that results from giving each particular point for each particular school or each particular county. *Summaries* are the vital things, that can be used; and this will be found to be a book of summaries, brief and complete. If any one needs further any of the details from which these summaries are made up, he can get them by addressing the Superintendent of Public Instruction.

EDWARD HYATT.

STATE BOARD OF EDUCATION.

JAMES N. GILLETT, Governor, - - - - - - - - SACRAMENTO
President of the Board.

EDWARD HYATT, Superintendent of Public Instruction, - - SACRAMENTO
Secretary of the Board.

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President of State Normal School.

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President of State Normal School.

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President of State Normal School.

C. C. VAN LIEW, - - - - - - - - - - - CHICO
President of State Normal School.

BENJAMIN IDE WHEELER, - - - - - - - - - BERKELEY
President of State University.

ALEXIS F. LANGE, - - - - - - - - - BERKELEY
Professor of Pedagogy at State University.

COUNTY SUPERINTENDENTS OF SCHOOLS.

County.	Name.	Address.
Alameda	Geo. W. Frick	Oakland
Alpine	Mrs. E. A. Grover	Markleeville
Amador	W. H. Greenhalgh	Jackson
Butte	Mrs. Minnie Abrams	Oroville
Calaveras	Frank Wells	San Andreas
Colusa	Lillie L. Laugenour	Colusa
Contra Costa	W. H. Hanlon	Martinez
Del Norte	Mrs. A. M. Laduron	Crescent City
El Dorado	S. B. Wilson	Placerville
Fresno	E. W. Lindsay	Fresno
Glenn	S. M. Chaney	Willows
Humboldt	George Underwood	Eureka
Imperial	J. E. Carr	El Centro
Inyo	Mrs. M. A. Clarke	Bishop
Kern	Robert L. Stockton	Bakersfield
Kings	Mrs. N. E. Davidson	Hanford
Lake	Hettie Irwin	Lakeport
Lassen	W. B. Philliber	Susanville
Los Angeles	Mark Keppel	Los Angeles
Madera	Estella Bagnelle	Madera
Marin	James Davidson	San Rafael
Mariposa	Julia L. Jones	Mariposa
Mendocino	L. W. Babcock	Ukiah
Merced	Mrs. Belle S. Gribi	Merced
Modoc	Eva W. Spargur	Alturas
Mono	Cordelia E. Hays	Bridgeport
Monterey	Duncan Stirling	Salinas
Napa	Lena A. Jackson*	Napa
Nevada	J. G. O'Neill	Nevada City
Orange	R. P. Mitchell*	Santa Ana
Placer	C. N. Shane	Auburn
Plumas	Miranda Ray Arms	Quincy
Riverside	Raymond Cree	Riverside
Sacramento	Mrs. Minnie O'Neill	Sacramento
San Benito	John H. Garner	Hollister
San Bernardino	A. S. McPherron	San Bernardino
San Diego	Hugh J. Baldwin	San Diego
San Francisco	Alfred Roncovieri	San Francisco
San Joaquin	E. B. Wright	Stockton
San Luis Obispo	F. E. Darke	San Luis Obispo
San Mateo	Roy W. Cloud	Redwood City
Santa Barbara	Mamie V. Lehner	Santa Barbara
Santa Clara	D. T. Bateman	San Jose
Santa Cruz	Champ S. Price	Santa Cruz
Shasta	Lulu E. White	Redding
Sierra	Belle Alexander	Downieville
Siskiyou	Mrs. E. Persons Wood	Yreka
Solano	D. H. White	Fairfield
Sonoma	DeWitt Montgomery	Santa Rosa
Stanislaus	Florence Boggs	Modesto
Sutter	L. L. Freeman	Yuba City
Tehama	Delia D. Fish	Red Bluff
Trinity	Nellie M. Jordan	Weaverville
Tulare	C. J. Walker	Visalia
Tuolumne	G. P. Morgan	Columbia
Ventura	Jas. E. Reynolds	Ventura
Yolo	May E. Dexter	Woodland
Yuba	E. T. Manwell*	Marysville

*Appointed.

STATE NORMAL SCHOOLS—Continued.

Expenditures for the School Year ending June 30, 1907.

Name and Location of School.	Amount Paid for Teachers' Salaries.	Amount Paid for Janitors, Gardeners, Librarian, Supplies, Etc.	Amount Paid for Sites, Buildings, and Furniture	Amount Paid for Library Books and for Apparatus.	Total Expenditures.	Balance on Hand at Close of School Year.
Chico	$28,379 00	$8,014 32	$1,873 71	$1,122 62	$39,389 65	$5,621 70
Los Angeles	48,491 68	5,926 06	2,506 20	1,755 22	58,679 16	1,853 46
San Diego	25,583 08	7,065 16	721 15	1,279 50	34,648 89	49,973 94
San Francisco	20,196 56	5,543 19	24,727 06	2,738 57	53,205 38	82,497 43
San Jose	48,516 76	6,880 91	31,163 46	2,301 50	88,862 63	280 22
Totals	$171,167 08	$33,429 64	$60,991 58	$9,197 41	$274,785 71	$140,226 75

Expenditures for the School Year ending June 30, 1908.

Chico	$30,133 50	$7,840 87	$4,820 09	$998 56	$43,793 02	$1,233 45
Los Angeles	48,985 95	5,099 28	876 71	1,906 19	56,868 13	835 10
San Diego	27,466 44	6,692 87	7,046 93	1,037 44	42,243 68	43,448 48
San Francisco	21,504 96	9,599 47	94,162 74	1,257 47	126,524 64	3,558 23
San Jose	44,957 64	10,277 90	3,005 99	1,105 31	59,346 84	249,861 48
Totals	$173,048 49	$39,510 39	$109,912 46	$6,304 97	$328,776 31	$298,936 74

Valuation of Property, 1907.

Name and Location of School.	Area of Grounds.	Grounds.	Buildings.	Furniture.	Libraries.	Apparatus.	Total.
	Acres.						
Chico	8.00	$16,000	$168,500	$7,000 00	$15,000 00	$6,500 00	$213,000 00
Los Angeles	4.50	275,000	185,000	7,500 00	6,000 00	4,000 00	477,500 00
San Diego	16.50	30,000	126,500	10,355 92	7 011 33	5,409 72	179,276 97
San Francisco		50,000	40,000	3,000 00	32,000 00	300 00	125,300 00
San Jose	18.30	50,000	73,790	10,000 00	12,000 00	8,900 00	154,690 00
Totals	47.30	$421,000	$593,790	$37,855 92	$72,011 33	$25,109 72	$1,149,766 97

Valuation of Property, 1908.

	Acres.						
Chico	8.00	$16,000	$170,000	$7,000 00	$16,000 00	$6,500 00	$215,500 00
Los Angeles	4.50	275,000	185,000	7,500 00	15,000 00	4,000 00	486,500 00
San Diego	16.50	30,000	126,500	11,291 00	7,871 00	5,587 00	181,249 00
San Francisco	.85	60,000	103,500	10,000 00	5,000 00	500 00	179 000 00
San Jose	18.30	50,000	73,790	10,000 00	13,000 00	8,900 00	155,690 00
Totals	48.15	$431,000	$658,790	$45,791 00	$56,871 00	$25,487 00	$1,217,939 00

Number of Volumes in Libraries.

Name and Location of School.	1907. At Beginning of Year	1907. Bought during Year	1907. Donated	1907. Lost or Worn Out during Year	1907. Total	1908. At Beginning of Year	1908. Bought during Year	1908. Donated	1908. Lost or Worn Out during Year	1908. Total
Chico	12,604	880	25	30	13,479	13,479	718	98	43	14,252
Los Angeles	14,230	1,020		50	15,200	16,000	1,417	33	37	17,413
San Diego	5,622	929	127	16	6,662	6,662	1,020	109	51	7,740
San Francisco	2,989	2,387	196	73	5,499	5 499	947	153	103	6,496
San Jose	9,684	428	92		10,204	10,204	1,066	39		11,309
Totals	45,129	5,644	440	169	51,044	51,844	5,168	432	234	57,210

STATE NORMAL SCHOOLS—Continued.

Number of Graduates Since Organization.

Year.	Chico. (Organized 1889.)			Los Angeles. (Organized 1882.)			San Diego. (Organized 1897.)			San Francisco. (Organized 1899.)			San Jose. (Organized 1862.)		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1863													0	4	4
1864													1	18	19
1865													4	19	23
1866													8	25	33
1867													4	27	31
1868													11	37	48
1869													3	26	29
1870													4	40	44
1871													4	17	21
1872													4	13	17
1873													4	16	20
1874													5	28	33
1875													9	36	45
1876													8	30	38
1877													6	36	42
1878													10	48	58
1879													8	36	44
1880													6	41	47
1881													2	32	34
1882													13	62	75
1883													14	79	93
1884				3	19	22							16	72	88
1885				6	29	35							13	96	109
1886				11	32	43							18	82	100
1887				4	44	48							11	87	98
1888				4	31	35							18	103	121
1889				10	47	57							17	112	129
1890				8	41	49							14	142	156
1891	3	14	17	9	62	71							8	96	104
1892	6	18	24	6	72	78							10	99	109
1893	5	27	32	11	80	91							5	131	136
1894	3	27	30	11	65	76							10	124	134
1895	3	49	52	12	72	84							8	148	156
1896	9	35	44	10	55	65							13	153	166
1897	3	30	33	7	48	55							10	99	109
1898	3	17	20	10	78	88							5	81	86
1899	6	39	45	5	102	107							10	100	110
1900	16	53	69	11	103	114	3	23	26				12	110	122
1901	12	37	49	10	120	130	5	20	25	0	36	36	8	82	90
1902	6	35	41	10	97	107	5	42	47	0	33	33	20	158	178
1903	9	52	61	8	103	111	2	61	63	0	54	54	18	193	211
1904	5	35	40	8	84	92	6	39	45	0	40	40	14	135	149
1905	9	53	62	5	115	120	5	39	44	0	46	46	6	147	153
1906	7	46	53	3	153	156	1	36	37	0	64	64	7	162	169
1907	5	50	55	3	135	138	2	53	55	0	75	75	11	144	155
1908	8	77	75	6	204	210	3	54	57	0	57	57	5	246	251
Totals	118	694	812	193	2007	2200	32	367	399	0	405	405	425	3864	4289

Total number of graduates—Men 768
Women 7,337

Total 8,105

STATISTICS OF CALIFORNIA POLYTECHNIC SCHOOL, AT SAN LUIS OBISPO, FOR 1907 AND 1908.

	1907.	1908.
Number of teachers employed—		
Men	10	10
Women	2	3
Total	12	13
Number of students enrolled, 1907—		
First year— Boys, 47; Girls, 23	70	
Second year—Boys, 29; Girls, 11	40	
Third year— Boys, 9; Girls, 7	16	
Total— Boys, 85; Girls, 41	126	
Number of students enrolled, 1908—		
First year— Boys, 57; Girls, 15		72
Second year—Boys, 37; Girls, 14		51
Third year— Boys, 12; Girls, 6		18
Total— Boys, 106; Girls, 35		141
Number of graduates, 1907—		
Boys, 9; Girls, 7	16	
Number of graduates, 1908—		
Boys, 12; Girls, 4		16
Financial Statement—		
Receipts—		
Balance on hand	$36,005 63	$4,117 89
From State apportionment	35,250 00	121,775 00
From laboratory fees	1,254 00	1,451 00
From dormitory	4,397 30	4,919 41
From farm, dairy, poultry, and power house	1,046 98	1,070 94
Other sources	74 75	384 97
	$78,028 66	$133,719 21
Expenditures—		
For teachers' salaries	$18,234 34	$19,750 00
For janitors' salaries	2,553 20	2,008 45
For services on farm and grounds	3,052 90	6,130 00
For supplies	4,932 16	4,064 31
For buildings and sites	27,400 00	29,026 00
For books and apparatus	4,714 30	15,271 00
For printing	696 75	369 50
For trustees' expenses	289 58	319 85
For improvement of grounds	2,529 93	1,955 37
For contingent supplies	6,790 01	8,135 08
For pay of engineers and student assistants	517 80	579 00
Other expenses	2,199 80	3,920 00
	$73,910 77	$91,528 56
Not available 1907-08	$339 21	
Balance on hand June 30	$4,117 89	$42,190 65
Valuation of property—		
Area of grounds, acres	281.04	311.04
Valuation of grounds	$12,000 00	$25,000 00
Valuation of buildings	81,460 00	81,460 00
Valuation of furniture	4,100 00	4,100 00
Valuation of library	1,700 00	2,100 00
Valuation of apparatus	8,300 00	26,135 00
Valuation of farm stock and tools	7,000 00	7,055 00
Totals	$114,560 00	$145,850 00

STATISTICS OF THE CALIFORNIA INSTITUTION FOR THE DEAF AND THE BLIND, AT BERKELEY.

BY WARRING WILKINSON.

The enrollment of pupils for the two years ending June 30, 1908, has been as follows:

Deaf boys	99	
Deaf girls	85	
Total deaf		184
Blind boys	50	
Blind girls	46	
Total blind		96
Total, both classes		280

The number of teachers in the two departments, including manual craft instructors, has been:

Deaf department teachers, men	10
Deaf department teachers, women	6
Blind department teachers, men	2
Blind department teachers, women	5
Total	23

The total cost of maintaining the Institution and all its departments, for the past two years, has been as follows:

RECEIPTS AND EXPENDITURES.

Receipts.

Appropriation for salaries and wages	$92,000 00
Appropriation for support	43,000 00
	$135,000 00

Expenditures.

Salaries and wages	$91,572 67
Supplies	42,169 58
	$133,742 25
Balance	$1,257 75

CONTINGENT FUND.

Balance on hand June 30, 1906	$3,846 99
Receipts	12,694 93
Total	$16,541 92
Expenditures	13,673 04
Balance on hand June 30, 1908	$2,868 88

LIST OF HIGH SCHOOLS AND APPORTIONMENT OF STATE HIGH SCHOOL FUND.

County, and Name of School.	Average Daily Attendance.	Jan. 10, 1907. Total Apportionment.	Dec. 9, 1907. Total Apportionment.	Average Daily Attendance.	Jan. 7, 1908. Total Apportionment.	Mar. 3, 1908. Total Apportionment.	July 7, 1908. Total Apportionment.
Alameda.							
Alameda	347	$2,204 33	$951 59	342	$998 52	$1,935 39	$1,309 37
Berkeley	733	4,288 73	1,850 97	760	2,030 98	3,937 61	2,663 69
Oakland	804	4,672 13	2,016 40	785	2,092 73	4,057 36	2,744 69
Oakland Polytechnic	258	1,723 73	744 22	300	894 78	1,734 21	1,173 29
Union No. 1	64	676 13	292 20	52	282 22	546 29	369 77
Union No. 2	70	708 53	306 18	75	339 03	656 46	444 29
Union No. 3	60	654 53	282 88	54	287 16	555 87	376 25
Union No. 4	148	1,129 73	487 92	197	640 37	1,240 84	839 57
Total	2,484	$16,057 84	$6,932 36	2,565	$7,565 79	$14,664 03	$9,920 92
Amador.							
Ione, Union	50	$600 53	$259 58	47	$269 87	$522 34	$353 57
Total	50	$600 53	$259 58	47	$269 87	$522 34	$353 57
Butte.							
Chico	141	$1,091 93	$471 61	157	$541 57	$1,049 24	$709 97
Gridley	33	508 73	219 97	48	272 34	527 13	356 81
Oroville	51	605 93	261 91	58	297 04	575 03	389 21
Total	225	$2,206 59	$953 49	263	$1,110 95	$2,151 40	$1,455 99
Calaveras.							
Bret Harte	32	$503 33	$217 64	27	$220 47	$426 54	$288 77
Calaveras County	35	519 53	224 63	27	220 47	426 54	288 77
Total	67	$1,022 86	$442 27	54	$440 94	$853 08	$577 54
Colusa.							
Colusa	65	$681 53	$294 53	62	$306 92	$594 19	$402 17
Pierce, Jt. Union	25	465 53	201 33	29	225 41	436 12	295 25
Total	90	$1,147 06	$495 86	91	$532 33	$1,030 31	$697 42
Contra Costa.							
Alhambra	39	$541 13	$233 95	44	$262 46	$507 97	$343 85
John Swett	37	530 33	229 29	43	259 99	503 18	340 61
Liberty	32	503 33	217 64	26	218 00	421 75	285 53
Mount Diablo	60	654 53	282 88	52	282 22	546 29	369 77
Riverview	38	535 73	231 62	53	284 69	551 08	373 01
Total	206	$2,765 05	$1,195 38	218	$1,307 36	$2,530 27	$1,712 77
Del Norte.							
Del Norte County	40	$546 53	$236 28	37	$245 17	$474 44	$321 17
Total	40	$546 53	$236 28	37	$245 17	$474 44	$321 17
El Dorado.							
El Dorado County	59	$649 13	$280 55	75	$339 03	$656 46	$444 29
Total	59	$649 13	$280 55	75	$339 03	$656 46	$444 29

APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	Jan. 10, 1907. Total Apportionment.	Dec. 9, 1907. Total Apportionment.	Average Daily Attendance.	Jan. 7, 1908. Total Apportionment.	Mar. 3, 1908. Total Apportionment.	July 7, 1908. Total Apportionment.
Fresno.							
Clovis	39	$541 13	$233 95	44	$262 46	$507 97	$343 85
Fowler	48	589 73	254 92	58	297 04	575 03	389 21
Fresno	301	1,955 93	844 41	340	993 58	1,925 81	1,302 89
Kingsburg, Jt. Union	16	416 93	180 36	21	205 65	397 80	269 33
Laton	23	454 73	196 67	34	237 76	460 07	311 45
Reedley, Jt. Union	31	497 93	215 31	39	250 11	484 02	327 65
Sanger	48	589 73	254 92	57	294 57	570 24	385 97
Selma	113	940 73	406 37	101	403 25	781 00	528 53
Washington	48	589 73	254 92	49	274 81	531 92	360 05
Total	667	$6,576 57	$2,841 83	743	$3,219 23	$6,233 86	$4,218 93
Glenn.							
Glenn County	35	$519 53	$224 63	41	$255 05	$393 01	$266 09
Orland, Jt. Union	(12)			20	203 18	493 60	334 13
Total	35	$519 53	$224 63	61	$458 23	$886 61	$600 22
Humboldt.							
Arcata	39	$541 13	$233 95	49	$274 81	$531 92	$360 05
Eureka	199	1,405 13	606 75	197	640 37	1,240 84	839 57
Ferndale	36	524 93	226 96	49	274 81	531 92	360 05
Fortuna	36	524 93	226 96	45	264 93	512 76	347 09
Total	310	$2,996 12	$1,294 62	340	$1,454 92	$2,817 44	$1,906 76
Inyo.							
Bishop	32	$503 33	$217 64	25	$215 53	$416 96	$282 29
Total	32	$503 33	$217 64	25	$215 53	$416 96	$282 29
Kern.							
Kern County	174	$1,270 13	$548 50	156	$539 10	$1,044 45	$706 73
Total	174	$1,270 13	$548 50	156	$539 10	$1,044 45	$706 73
Kings.							
Hanford	149	$1,135 13	$490 25	171	$576 15	$1,116 30	$755 33
Lemoore, Jt. Union	35	519 53	224 63	41	255 05	493 60	334 13
Total	184	$1,654 66	$714 88	212	$831 20	$1,609 90	$1,089 46
Lake.							
Clear Lake	79	$757 13	$327 15	68	$321 74	$622 93	$421 61
Total	79	$757 13	$327 15	68	$321 74	$622 93	$421 61
Lassen.							
Susanville	48	$589 73	$254 92	56	$292 10	$565 45	$382 73
Total	48	$589 73	$254 92	56	$292 10	$565 45	$382 73
Los Angeles.							
Alhambra	67	$692 33	$299 19	62	$306 92	$594 19	$402 17
Bonita	40	546 53	236 28	50	277 28	536 71	363 29
Citrus	68	697 73	301 52	72	331 62	642 09	434 57
Compton	96	848 93	366 76	102	405 72	785 79	531 77
Covina	72	719 33	310 84	73	334 09	646 88	437 81
El Monte	38	535 73	231 62	41	255 05	493 60	334 13
Excelsior	27	476 33	205 99	27	220 47	426 54	288 77
Glendale	57	638 33	275 89	75	339 03	656 46	444 29
Hollywood	128	1,021 73	441 32	147	516 87	1,001 34	677 57
Inglewood	16	416 93	180 36	22	208 12	402 59	272 57
Jewell	28	481 73	208 32	38	247 64	479 23	324 41

APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	Jan 10,1907. Total Apportionment.	Dec. 9,1907 Total Apportionment.	Average Daily Attendance.	Jan. 7,1908. Total Apportionment.	Mar. 3,1908 Total Apportionment.	July 7, 1908. Total Apportionment.
Los Angeles—Cont'd							
Long Beach	255	1,707 53	737 23	332	973 82	1,887 49	1,276 97
Los Angeles	1,335	7,539 53	3.253 63	1,363	3,520 39	6,825 98	4,617 41
Los Angeles (Pol.)	1,061	6,059 93	2,615 21	1,402	3,616 72	7,012 79	4,743 77
Los Nietos Valley	56	632 93	273 56	66	316 80	613 35	415 13
Monrovia	91	821 93	355 11	97	393 37	761 84	515 57
Pasadena	504	3,052 13	1,317 40	570	1,561 68	3,027 51	2,048 09
Pomona	190	1,356 53	585 78	214	682 36	1,322 27	894 65
Redondo	(9)			26	218 00	421 75	285 53
San Fernando	32	503 33	217 64	37	245 17	474 44	321 17
San Pedro	38	535 73	231 62	47	269 87	522 34	353 57
Santa Monica	104	892 13	385 40	137	492 17	953 44	645 17
South Pasadena	42	557 33	240 94	62	306 92	594 19	402 17
Whittier	172	1,259 33	543 84	183	605 79	1,173 78	794 21
Wilmington	(11)						
Total	4,517	$31,993 99	$13.815 45	5,245	$16,645 87	$32,256 59	$21,824 76
Madera.							
Madera	59	$649 13	$280 55	50	$277 28	$536 71	$363 29
Total	59	$649 13	$280 55	50	$277 28	$536 71	$363 29
Marin.							
San Rafael	115	$951 53	$411 03	130	$474 88	$919 91	$622 49
Total	115	$951 53	$411 03	130	$474 88	$919 91	$622 49
Mendocino.							
Fort Bragg	51	$605 93	$261 91	39	$250 11	$484 02	$327 65
Mendocino	37	530 33	229 29	40	252 58	488 81	330 89
Point Arena	(14)						
Round Valley	23	454 73	196 67	21	205 65	397 80	269 33
Ukiah	108	913 73	394 72	122	455 12	881 59	596 57
Willits	24	460 13	199 00	30	227 88	440 91	298 49
Total	243	$2,964 85	$1,281 59	252	$1,391 34	$2,693 13	$1,822 93
Merced.							
Merced	95	$843 53	$364 43	95	$388 43	$752 26	$509 09
West Side	35	519 53	224 63	40	252 58	488 81	330 89
Total	130	$1,363 06	$589 06	135	$641 01	$1,241 07	$839 98
Modoc.							
Modoc County	34	$514 13	$222 30	32	$232 82	$450 49	$304 97
Surprise Valley	52	611 33	264 24	51	279 75	541 50	366 53
Total	86	$1,125 46	$486 54	83	$512 57	$991 99	$671 50
Monterey.							
Monterey	37	$530 33	$229 29	39	$250 11	$484 02	$327 65
Pacific Grove	61	659 93	285 21	54	287 16	555 87	376 25
Salinas City	102	881 33	380 74	118	445 24	862 43	583 61
Total	200	$2,071 59	$895 24	211	$982 51	$1,902 32	$1,287 51
Napa.							
Napa	83	$778 73	336 47	99	$398 31	$771 42	$522 05
St. Helena	46	578 93	250 26	35	240 23	464 86	314 69
Total	129	$1,357 66	$586 73	134	$638 54	$1,236 28	$836 74

APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	Jan. 10, 1907. Total Apportionment.	Dec. 9, 1907. Total Apportionment.	Average Daily Attendance	Jan. 7, 1908. Total Apportionment.	Mar. 3, 1908. Total Apportionment.	July 7, 1908. Total Apportionment.
Nevada.							
Grass Valley	81	$767 93	$331 81	81	$353 85	$685 20	$463 73
Meadow Lake	(13)			20	203 18	393 01	266 09
Nevada City	67	692 33	299 19	74	336 56	651 67	441 05
Total	148	$1,460 26	$631 00	175	$893 59	$1,729 88	$1,170 87
Orange.							
Anaheim	58	$643 73	$278 22	71	$329 15	$637 30	$431 33
Fullerton	60	654 53	282 88	80	351 38	680 41	460 49
Los Bolsas	(16)			27	220 47	426 54	288 77
Orange	112	935 33	404 04	120	450 18	872 01	590 09
Santa Ana	291	1,901 93	821 11	289	867 61	1,681 52	1,137 65
Total	521	$4,135 52	$1,786 25	587	$2,218 79	$4,297 78	$2,908 33
Placer.							
Placer County	99	$865 13	$373 75	111	$427 95	$828 90	$560 93
Total	99	$865 13	$373 75	111	$427 95	$828 90	$560 93
Riverside.							
Banning	24	$460 13	$199 00	24	$213 06	$412 17	$279 05
Corona	59	649 13	280 55	61	304 45	589 40	398 93
Elsinore	20	438 53	189 68				
Hemet	38	535 73	231 62	46	267 40	517 55	350 33
Perris	20	438 53	189 68				
Riverside	314	2,026 13	874 70	317	936 77	1,815 64	1,228 37
San Jacinto	23	454 73	196 67	22	208 12	402 59	272 57
Total	498	$5,002 91	$2,161 90	470	$1,929 80	$3,737 35	$2,529 25
Sacramento.							
Elk Grove	30	$492 53	$212 98	33	$235 29	$455 28	$308 21
Sacramento	370	2,328 53	1,005 18	385	1,104 73	2,141 36	1,448 69
Total	400	$2,821 06	$1,218 16	418	$1,340 02	$2,596 64	$1,756 90
San Benito.							
Hollister	91	$821 93	$355 11	85	$363 73	$704 36	$476 69
Total	91	$821 93	$355 11	85	$363 73	$704 36	$476 69
San Bernardino.							
Chino	21	$443 93	$192 01	28	$222 94	$431 33	$292 01
San Bernardino	145	1,113 53	480 93	90	376 08	728 31	492 89
Colton	75	735 53	317 83				
Needles	21	443 93	192 01	110	425 48	824 11	557 69
Ontario	122	989 33	427 34	319	941 71	1,825 22	1,234 85
Redlands	317	2,042 33	881 69	200	647 78	1,255 21	849 29
Total	701	$5,768 58	$2,491 81	747	$2,613 99	$5,064 18	$3,426 73
San Diego.							
Cuyamaca	(17)						
El Cajon	21	$443 93	$192 01	25	$215 53	$416 96	$282 29
Escondido	76	740 93	320 16	71	329 15	637 30	431 33
Fallbrook	33	508 73	219 97	27	220 47	426 54	288 77
Imperial Valley				23	210 59	407 38	275 81
National City	32	503 33	217 64	27	220 47	426 54	288 77
Oceanside				18	198 24	383 43	259 61
Ramona	(18)						
San Diego	350	2,220 53	958 58	416	1,181 30	2,289 85	1,549 13
Total	512	$4,417 45	$1,908 36	607	$2,575 75	$4,988 00	$3,375 71

APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	Jan. 10, 1907. Total Apportionment.	Dec. 9, 1907. Total Apportionment.	Average Daily Attendance.	Jan. 7, 1908. Total Apportionment.	Mar. 3, 1908. Total Apportionment.	July 7, 1908 Total Apportionment.
San Francisco.							
Commercial	477	$2,906 33	$1,254 49	404	$1,151 66	$2,232 37	$1,510 25
Girl's	558	3,343 73	1,443 22	401	1,144 25	2,218 00	1,500 53
Lowell	675	3,975 53	1,715 83	579	1,583 91	3,070 62	2,077 25
Mission	317	2.042 33	881 69	240	746 58	1,446 81	978 89
Polytechnic	322	2,069 33	893 34	138	494 64	958 23	648 41
Total	2,349	$14,337 25	$6,188 57	1,762	$5,121 04	$9,926 03	$6,715 33
San Joaquin.							
Lodi	63	$670 73	$289 87	78	$346 44	$670 83	$454 01
Stockton	287	1,880 33	811 79	340	993 58	1,925 81	1,302 89
Total	350	$2,551 06	$1,101 66	418	$1,340 02	$2,596 64	$1,756 90
San Luis Obispo.							
Arroyo Grande	30	$492 53	$212 98	43	$259 99	$503 18	$340 61
Paso Robles	51	605 93	261 91	63	309 39	598 98	405 41
San Luis Obispo	70	708 53	306 18	61	304 45	589 40	398 93
Total	151	$1,806 99	$781 07	167	$873 83	$1,691 56	$1,144 95
San Mateo.							
San Mateo	52	$611 33	$264 24	56	$292 10	$565 45	$382 73
Sequoia	85	789 53	341 13	69	324 21	627 72	424 85
Total	137	$1,400 86	$605 37	125	$616 31	$1,193 17	$807 58
Santa Barbara.							
Lompoc	40	$546 53	$236 28	33	$235 29	$455 28	$308 21
Santa Barbara	201	1,415 93	611 41	234	731 76	1,418 07	959 45
Santa Maria	87	800 33	345 79	93	383 49	742 68	502 61
Santa Ynez Valley	27	476 33	205 99	—(15)			
Total	355	$3,239 12	$1,399 47	360	$1,350 54	$2,616 03	$1,770 27
Santa Clara.							
Campbell	80	$762 53	$329 48	86	$366 20	$709 15	$479 93
Gilroy	77	746 33	322 49	73	334 09	646 88	437 81
Live Oak	26	470 93	203 66	32	232 82	450 49	304 97
Los Gatos	35	681 53	294 53	70	326 68	632 51	428 09
Mountain View	47	584 33	252 59	56	292 10	565 45	382 73
Palo Alto	154	1,162 13	501 90	180	598 38	1,159 41	784 49
San Jose	665	3,921 53	1,692 53	571	1,564 15	3.032 30	2,051 33
Santa Clara	150	1,140 53	492 58	163	556 39	1,077 98	729 41
Total	1,264	$9,469 84	$4,089 76	1,231	$4,270 81	$8,274 17	$5,598 76
Santa Cruz.							
Boulder Creek	18	$427 73	$185 02	26	$218 00	$421 75	$285 53
Santa Cruz	205	1.437 53	620 73	194	632 96	1.226 47	829 85
Watsonville	133	1,048 73	452 97	126	465 00	900 75	609 53
Total	356	$2,913 99	$1,258 72	346	$1,315 96	$2,548 97	$1,724 91
Shasta.							
Shasta County	81	$767 93	$331 81	113	$432 89	$838 48	$567 41
Total	81	$767 93	$331 81	113	$432 89	$838 48	$567 41
Siskiyou.							
Etna Mills	36	$524 93	$226 96	35	$240 23	$464 86	$314 69
Siskiyou County	48	589 73	254 92	63	309 39	598 98	405 41
Total	84	$1,114 66	$481 88	98	$549 62	$1,063 84	$720 10

APPORTIONMENT OF STATE HIGH SCHOOL FUND—Continued.

County, and Name of School.	Average Daily Attendance.	Jan. 10, 1907 Total Apportionment.	Dec. 9, 1907. Total Apportionment.	Average Daily Attendance.	Jan. 7, 1908. Total Apportionment.	Mar. 3, 1908. Total Apportionment.	July 7, 1908. Total Apportionment.
Solano.							
Armijo	75	$735 53	$317 83	67	$319 27	$618 14	$418 37
Benicia	33	508 73	219 97	34	237 76	460 07	311 45
Dixon	49	596 13	257 25	43	259 99	503 18	340 61
Vacaville	72	719 33	310 84	61	304 45	589 40	398 93
Vallejo	86	794 93	343 46	96	390 90	757 05	512 33
Total	315	$3,353 65	$1,449 35	301	$1,512 37	$2,927 84	$1,981 69
Sonoma.							
Cloverdale	23	$454 73	$196 67	23	$210 59	$407 38	$275 81
Healdsburg	77	746 33	322 49	82	356 32	689 99	466 97
Petaluma	117	962 33	415 69	113	432 89	838 48	567 41
Santa Rosa	246	1,658 93	716 26	221	699 65	1,355 80	917 33
Sonoma Valley	27	476 33	205 99	34	237 76	460 07	311 45
Total	490	$4,298 65	$1,857 10	473	$1,937 21	$3,751 72	$2,538 97
Stanislaus.							
Modesto	89	$811 13	$350 45	93	$383 49	$742 68	$502 61
Oakdale	33	508 73	219 97	28	222 94	431 33	292 01
Orestimba (new)	------	------	------	16	193 30	373 85	253 13
Turlock (new)	------	------	------	19	200 71	388 22	262 85
Total	122	$1,319 86	$570 42	156	$1,000 44	$1,936 08	$1,310 60
Sutter.							
Sutter City	40	$546 53	$236 28	33	$235 29	$455 28	$308 21
Total	40	$546 53	$236 28	33	$235 29	$455 28	$308 21
Tehama.							
Corning	55	$627 53	$271 23	50	$277 28	$536 71	$363 29
Red Bluff	89	811 13	350 45	93	383 49	742 68	502 61
Total	144	$1,438 66	$621 68	143	$660 77	$1,279 39	$865 90
Tulare.							
Dinuba	56	$632 93	$273 56	72	$331 62	$642 09	$434 57
Porterville	68	697 73	301 52	81	353 85	685 20	463 73
Tulare	138	1,075 73	464 62	129	472 41	915 12	619 25
Visalia	151	1,145 93	494 91	135	487 23	943 86	638 69
Total	413	$3,552 32	$1,534 61	417	$1,645 11	$3,186 27	$2,156 24
Tuolumne.							
Tuolumne County	52	$611 33	$264 24	48	$272 34	$527 13	$356 81
Total	52	$611 33	$264 24	48	$272 34	$527 13	$356 81
Ventura.							
Oxnard	55	$627 53	$271 23	57	$294 57	$570 24	$385 97
Santa Paula	114	946 13	408 70	91	378 55	733 10	496 13
Ventura	102	881 33	380 74	130	474 88	919 91	622 49
Total	271	$2,454 99	$1,060 67	278	$1,148 00	$2,223 25	$1,504 59
Yolo.							
Esparto	28	$481 73	$208 32	33	$235 29	$455 28	$308 21
Winters, Joint	43	562 73	243 27	44	262 46	507 97	343 85
Woodland	102	881 33	380 74	124	460 06	891 17	603 05
Total	173	$1,925 79	$832 33	201	$957 81	$1,854 42	$1,255 11
Yuba.							
Marysville	84	$784 13	$338 80	88	$371 14	$718 73	$486 41
Total	84	$784 13	$338 80	88	$371 14	$718 73	$486 41

JANUARY 10, 1907.

Total number of High Schools entitled to receive State aid June 30, 1906	167
Total average daily attendance in such schools	20,430
Rate per school on one-third basis	$330 53
Rate per child on average daily attendance	$5 40
Amount apportioned on one-third basis	$55,198 51
Amount apportioned on attendance basis	$110,322 00
Total amount apportioned	$165,520 51
Balance on hand unapportioned	$78 91

Seven high schools fall below 20 in average daily attendance for the year closing June 30, 1906, and receive no State aid. Two fall below 20 in average daily attendance, but receive State aid owing to the fact that they have been in existence one year only.

DECEMBER 9, 1907.

Total number of High Schools entitled to receive State aid June 30, 1906	167
Total average daily attendance in such schools	20,430
Rate per school on one-third basis	$143 08
Rate per child on average daily attendance	$2 33
Amount apportioned on one-third basis	$23,894 36
Amount apportioned on attendance basis	$47,601 90
Total amount apportioned	$71,496 26
Balance on hand unapportioned	$189 08

JANUARY 7, 1908.

Total number of High Schools entitled to receive State aid June 30, 1907	171
Total average daily attendance in such schools	21,209
Rate per school on one-third basis	$153 78
Rate per child on average daily attendance	$2 47
Amount apportioned on one-third basis	$26,296 38
Amount apportioned on attendance basis	$52 386 23
Total amount apportioned	$78,682 61
Balance on hand unapportioned	$207 62

MARCH 3, 1908.

Total number of High Schools entitled to receive State aid June 30, 1907	171
Total average daily attendance June 30, 1907	21,209
Rate per school on one-third basis	$297 21
Rate per child on average daily attendance	$4 79
Amount apportioned on one-third basis	$50,822 91
Amount apportioned on attendance basis	$101,591 11
Total amount apportioned	$152,414 02
Balance on hand unapportioned	$58 67

The second installment of taxes is not delinquent till the last Monday in April. The regular time for apportioning this part of the tax is about the tenth of July.

JULY 7, 1908.

Total number of High Schools entitled to receive State aid June 30, 1907	171
Total average daily attendance June 30, 1907	21,209
Rate per school on one-third basis	$201 29
Rate per pupil on average daily attendance basis	$3 24
Amount apportioned on one-third basis	$34,420 59
Amount apportioned on attendance basis	$68,717 16
Total amount apportioned	$103,137 75
Balance unapportioned	$127 45

NOTE.—The total apportionment to the High Schools of the State for the school year has been as follows:

January 7, 1908, on school basis,	$153 78;	on attendance basis,	$2 47
March 3, 1908, on school basis,	297 21;	on attendance basis,	4 79
July 7, 1908, on school basis,	201 29;	on attendance basis,	3 24
Total on school basis,	$652 28;	on attendance basis,	$10 50

NUMBER OF TEACHERS EMPLOYED IN COUNTIES.

Counties.	Kindergartens.		Primary and Grammar Schools.		High Schools.		Night Schools.		Total.	
	1907.	1908.	1907.	1908.	1907.	1908.	1907.	1908.	1907.	1908.
Alameda	3	3	682	737	114	121	15	15	814	876
Alpine			3	3					3	3
Amador			61	61	3	3			64	64
Butte			126	138	15	17			141	155
Calaveras			67	69	5	6			72	75
Colusa			50	47	8	8			58	55
Contra Costa			106	114	20	24			126	138
Del Norte			19	19	3	3			22	22
El Dorado			65	64	4	5			69	69
Fresno	1	1	297	301	42	51			340	353
Glenn			44	43	6	7			50	50
Humboldt			172	178	14	17			186	195
Imperial				32		3				35
Inyo			21	23	2	3			23	26
Kern			112	111	10	11			122	122
Kings			57	55	14	14			71	69
Lake			47	46	5	5			52	51
Lassen			35	36	5	5			40	41
Los Angeles	127	135	1,454	1,554	276	323	2	4	1,859	2,016
Madera			45	45	4	4			49	49
Marin			83	89	6	7			89	96
Mariposa			29	28					29	28
Mendocino			153	150	23	21			176	171
Merced			77	79	9	12			86	91
Modoc			40	41	8	8			48	49
Mono			13	12					13	12
Monterey			131	130	15	15			146	145
Napa			79	81	9	9			88	90
Nevada			79	78	10	10			89	88
Orange	4	3	151	149	43	43			198	195
Placer			80	81	6	8			86	89
Plumas			29	29					29	29
Riverside	2	2	138	146	26	31			166	179
Sacramento	15	15	210	216	19	20	7	7	251	258
San Benito			49	48	5	5			54	53
San Bernardino	4	2	207	202	43	47			254	251
San Diego	6	6	232	223	40	43			278	272
San Francisco			814	913	76	86	81	98	971	1,097
San Joaquin			180	183	19	19			199	202
San Luis Obispo			127	128	13	13			140	141
San Mateo			75	84	12	13			87	97
Santa Barbara	7	7	120	131	25	25			152	163
Santa Clara			304	309	62	67	3	3	369	379
Santa Cruz			119	126	20	22			139	148
Shasta			125	125	8	8			133	133
Sierra			23	24					23	24
Siskiyou			104	103	8	8			112	111
Solano			115	112	23	24	1		139	136
Sonoma			230	234	26	25			256	259
Stanislaus			89	91	11	14			100	105
Sutter			40	40	3	3			43	43
Tehama		2	79	84	11	12			90	98
Trinity			25	25					25	25
Tulare			163	169	22	24			185	193
Tuolumne			54	53	4	5			58	58
Ventura	1	2	89	87	18	19			108	108
Yolo	1	1	78	75	11	12			90	88
Yuba			50	48	4	6			54	54
Totals	171	179	8,246	8,602	1,188	1,314	109	127	9,714	10,222

AVERAGE COST PER PUPIL PER ANNUM BY COUNTIES.

(Estimate based on cost of teachers' salaries and current expense.)

Counties.	Primary and Grammar Schools.		High Schools.	
	1907.	1908.	1907.	1908.
Alameda	$24 53	$31 66	$48 91	$53 61
Alpine	31 61	55 62		
Amador	25 30	27 33	71 09	58 73
Butte	25 25	24 41	81 97	68 21
Calaveras	23 88	26 66	98 63	112 21
Colusa	30 44	37 01	90 27	87 71
Contra Costa	21 97	28 95	93 22	110 20
Del Norte	24 15	26 51	76 45	106 19
El Dorado	25 64	32 88	89 30	109 93
Fresno	26 02	25 86	64 74	75 76
Glenn	33 91	35 90	91 12	102 26
Humboldt	24 24	25 35	55 77	59 67
Imperial		18 00		91 66
Inyo	24 92	27 34	52 60	100 12
Kern	35 10	29 93	72 81	97 55
Kings	20 58	20 00	65 05	80 00
Lake	28 10	27 85	64 94	83 16
Lassen	34 00	53 00	127 38	148 00
Los Angeles	25 27	29 37	68 84	92 12
Madera	33 52	47 60	127 13	113 40
Marin	21 12	24 98	54 66	56 14
Mariposa	30 82	32 94		
Mendocino	25 47	28 17	94 44	106 33
Merced	28 81	30 89	87 53	139 04
Modoc	21 00	25 31	99 00	84 58
Mono	49 58	48 74		
Monterey	27 20	33 50	63 40	75 00
Napa	22 81	26 00	69 09	82 68
Nevada	26 14	31 73	62 62	68 09
Orange	22 22	23 55	63 00	64 42
Placer	29 75	26 40	58 05	67 36
Plumas	39 00	50 00		
Riverside	25 69	33 82	59 00	54 00
Sacramento	29 51	23 11	54 61	54 40
San Benito	34 36	33 42	66 15	73 74
San Bernardino	27 33	26 42	79 92	81 38
San Diego	26 90	34 66	66 15	78 01
San Francisco	25 37	32 13	45 32	72 82
San Joaquin	26 00	28 32	61 50	70 52
San Luis Obispo	26 41	28 34	81 53	89 55
San Mateo	26 25	35 82	118 62	104 07
Santa Barbara	36 38	45 08	101 95	86 21
Santa Clara	26 45	28 65	53 50	65 88
Santa Cruz	25 21	26 49	70 55	76 19
Shasta	39 73	31 40	75 09	85 01
Sierra	26 23	37 65		
Siskiyou	27 20	28 46	113 37	144 32
Solano	24 69	30 67	95 36	93 25
Sonoma	23 56	24 99	69 38	65 12
Stanislaus	25 77	25 98	85 23	93 64
Sutter	27 70	36 00	109 80	84 00
Tehama	29 89	29 87	89 17	100 13
Trinity	43 07	53 20		
Tulare	25 02	25 36	56 63	68 20
Tuolumne	23 88	23 80	88 30	135 76
Ventura	30 09	32 91	89 27	109 75
Yolo	26 69	27 56	65 13	77 08
Yuba	29 68	39 39	52 48	68 77
Averages	$28 09	$25 91	$77 24	$68 09

Statement, by years, showing the Amount of Receipts and Expenditures for Public Primary, Grammar, High, Kindergarten, and Night Schools of the State of California, from 1852 to 1908, inclusive.

Years.	Total Amount of State School Fund Apportioned.	Total Amount Raised by County and City Taxes.	Total Amount Raised from Miscellaneous Sources.	Amount Paid for Salaries of Teachers.	Amount Paid for Repairs, Fuel, and Contingent Expenses.	Amount Paid for Libraries.	Amount Paid for Apparatus.	Amount Paid for Sites, Buildings, and Furniture.	Total Expenditures.
1851				Not reported.	Not reported	Not reported.	Not reported.	Not reported	Not reported.
1852			$2,417 00	$21,355 42	$2,000 00	Not reported.	Not reported.	$4,748 32	$28,103 74
1853			10,626 00	30,215 00	10,525 00	Not reported.	Not reported	13,491 01	54,231 01
1854	$52,061 00	$157,702 00	42,557 00	85 860 33	31,156 45	$3,990 52	Not reported.	151,822 52	272,829 82
1855	63,662 00	119,128 00	39,395 00	166,048 45	32,631 07	1,054 57	Not reported.	77,197 62	276,931 71
1856	69,961 00	121,639 00	28,619 00	200,941 00	49,668 84	2,127 16	Not reported.	52,484 00	305,221 00
1857	78,057 00	148,989 00	55,035 00	192,613 00	52,533 44	2,942 56	Not reported	59,743 00	307,832 00
1858	53,405 00	162,870 00	85,107 00	203,276 37	45,395 92	3,042 78	Not reported	88,199 70	339,914 77
1859	72,319 00	205,196 00	97,534 00	264,972 37	69,396 38	2,368 58	Not reported	90,266 42	427,003 75
1860	81,118 00	230,514 00	122,858 00	311,165 38	50,989 41	1,756 09	Not reported.	110,352 86	474,263 74
1861	81,461 00	241,861 00	114,397 00	311,501 91	54,493 99	2,299 28	Not reported.	101,818 38	470,113 56
1862	75,412 00	294,828 00	141,806 00	330,249 02	59,479 76	2,225 57	Not reported.	49,274 62	441,228 97
1863	145,537 00	328,554 00	68,209 00	328,338 02	58,271 97	594 75	$2,271 22	93,931 53	483,407 49
1864	132,217 00	260,842 00	84,084 00	411,101 01	69,562 36	1,132 21	6,010 84	167,393 44	655,199 86
1865	168,828 00	390,306 00	91,181 00	526,585 14	89,056 57	5,792 01	3,777 86	257,804 98	883,016 56
1866	132,410 00	470,668 00	79,600 00	551,462 02	116,577 47	2,074 81	4,059 47	185,056 42	859,230 19
1867	268,910 00	595,718 00	81,066 00	696,110 28	206,412 25	10,125 01	5,431 83	238,070 64	1,156,150 01
1868	252,603 00	654,738 00	73,986 00	763,639 15	143,518 56	19,069 56	4,061 72	221,118 43	1,151,407 42
1869	290,796 00	847,229 00	66,531 00	873,814 07	185,672 91	20,415 76	4,915 83	205,766 95	1,290,585 52
1870	360,447 00	839,756 00	63,441 00	976,937 75	179,070 23	29,984 22	3,692 27	339,362 37	1,529,046 84
1871	423,853 00	923,809 00	46,660 00	1,103,125 14	289,691 57	26,766 30	3,689 46	390,158 50	1,713,430 97
1872	424,022 00	1,249,943 00	232,075 00	1,282,799 15	277,900 99	25,793 54	4,720 13	290,119 01	1,881,332 82
1873	430,220 00	1,541,597 00	310,502 00	1,434,366 93	275,674 70	24,879 48	4,365 70	374,069 44	2,113,356 25
1874	428,414 12	1,332,208 82	345,316 95	1,560,830 16	331,952 30	21,752 82	4,152 80	192,467 25	2,111,155 33
1875	1,212,252 03	1,115,530 06	676,259 64	1,810,479 62	381,806 62	33,962 72	10,713 02	421,279 36	2,658,241 34
1876	1,317,603 84	1,240,637 31	158,206 40	1,983,939 96	374,222 49	48,757 50	10,974 66	440,706 37	2,858,600 98
1877	1,474,600 26	1,486,233 73	137,100 31	2,149,435 70	378,754 50	55,148 64	18,964 19	147,426 43	2,749,729 46
1878	1,579,195 52	1,393,014 96	100,396 84	2,272,551 19	426,707 66	53,947 85	12,513 65	390,094 92	3,155,815 27

1879	1,423,941 75	1,446,852 04	92,852 41	2,285,732 39	371,992 13	46,490 50	13,565 73	293,126 38	3,010,907 13
1880	1,506,171 84	1,393,572 44	104,824 80	2,207,043 85	400,867 61	44,546 39	21,842 63	190,270 94	2,864,571 42
1881	1,790,457 62	1,343,306 02	32,048 79	2,346,056 58	401,572 56	79,432 10	15,694 04	204,849 66	3,047,604 94
1882	1,882,121 67	1,260,843 64	23,046 88	2,406,780 68	411,117 17	63,060 32	20,618 98	221,089 05	3,122,666 20
1883	1,890,724 20	1,315,818 96	32,462 71	2,511,078 40	419,760 85	61,032 26	26,504 11	293,839 66	3,312,215 28
1884	1,894,191 00	1,411,543 56	27,715 40	2,573,623 54	415,587 39	59,642 08	23,204 69	292 165 85	3,364,223 55
1885	1,831,171 44	1,694,959 45	53,140 83	2,583,403 46	433,972 56	64,056 08	16,787 03	466,811 74	3,565,030 87
1886	1,890,733 32	1,690,704 86	138,596 48	2,710,621 82	422,843 30	64,627 32	24,833 01	283,006 18	3,505,931 63
1887	2,027,789 40	1,793,809 95	51,250 25	2,912,859 30	480,455 63	64,189 18	23,679 10	408,704 96	3,889,888 17
1888	2,168,686 08	2,170,058 19	259,554 55	3,083,027 24	527,035 55	58,229 04	31,534 85	621,554 82	4,321,381 50
1889	2,531,880 90	2,442,254 64	337,006 91	3,343,191 80	624,810 95	59,522 72	33,791 82	935,548 42	4,996,865 71
1890	2,635,716 10	2,293,335 75	98,092 22	3,594,588 98	706,995 12	71,121 94	42,442 85	703,947 79	5,119,096 68
1891	2,662,200 08	2,249,975 72	134,192 19	3,713,544 37	732,148 98	72,714 87	45,352 20	548,740 11	5,112,500 53
1892	2,354,786 00	2,464,706 04	266,455 77	3,874,346 88	750,929 32	72,961 08	45,424 77	608,229 27	5,351,891 32
1893	3,403,072 72	2,404,898 76	774,090 08	4,055,888 51	806,717 80	76,677 51	46,837 62	723,565 66	5,709,687 10
1894	2,770,661 84	2,388,359 31	337,815 12	4,005,721 80	752,757 68	61,890 04	30,130 55	574,293 10	5,424,793 17
1895	2,829,005 74	2,472,540 41	508,203 22	4,081,340 44	793,834 91	63,601 20	46,915 95	698,215 59	5,683,908 09
1896	3,043,884 60	2,517,827 78	256,021 31	4,291,481 12	899,861 54	71,249 23	35,492 78	503,674 80	5,801 759 47
1897	2,943,310 10	2,677,945 07	156,638 37	4,418,544 67	899,726 74	68,719 53	18,885 63	441,871 03	5,847,747 60
1898	3,106,072 72	2,684,416 96	364,030 62	4,582,625 71	1,010,710 13	72,975 97	16,693 40	494,899 39	6,177,904 60
1899	3,076,472 40	2,690,705 16	172 053 24	4,562,994 54	1,025,473 62	*88,541 06		397,793 15	6,074,602 37
1900	3 567,763 56	2,861,409 16	206,345 64	4,850,804 22	994,727 41	*81,749 79		268,157 32	6.195,438 74
1901	3,485,126 45	2,888,046 10	93,171 60	4,685,144 20	1,080,040 37	*82,995 12		525.050 16	6,373,229 85
1902	3,584,001 45	3,076 699 73	99,687 86	4,748,472 75	1,329,359 68	*88,923 05		439,305 94	6,606,061 42
1903	3,590,390 40	3,887,778 68	699,758 22	5,665,431 02	1,461,838 79	*105,016 92		937,879 47	8,170,166 20
1904	3,926,972 18	4,644,967 95	1,299,565 92	6,027,850 53	1,500,815 22	*138,439 04		1,734,359 36	9,401,464 15
1905	4,234,241 02	4,580,258 78	1,961,805 35	6,460,879 67	1,675,564 94	*133,457 82		1,408,100 86	9,678,003 29
1906	3,880,740 82	3,681,439 68	1,603,236 84	7,003,176 86	1,805,867 52	*148,351 94		1,983,163 70	10,940,560 02
1907	†4,300,379 23	7,394,551 55	593,194 87	7,422,575 41	2,011,921 54	163.996 70		2,620,211 24	12,218,704 89
1908	4,497,337 81	8,899,459 82	630,502 51	8,720,931 65	2,307,417 49	164,413 82		3,229,940 91	14,423,703 87

*Includes cost of apparatus. †Does not include balance on hand.

Statistical Summary, by years, of the Kindergarten, Night, Primary and Grammar, and High Schools of California, from 1851 to 1908, inclusive.

Years.	Number of Children Listed by Census Marshals.	Number of Children Under Five Years of Age.	Number of Census Children in Private Schools.	Number of Teachers.	Number of Children Enrolled on School Register.	Average Daily Attendance.
1851	5,906				1,846	
1852	17,821				3,314	
1853	19,442				4,193	2,020
1854	20,075			214	9,746	4,635
1855	26,077			301		6,442
1856	30,039			392		8,495
1857	35,722			486	17,232	9,717
1858	40,530	23,558		517	19,822	11,183
1859	48,676	28,300		744	23,519	13,364
1860	57,917	30,932	5,438	831	26,993	14,750
1861	68,395	35,334	6,306	932	31,786	17,804
1862	71,821	38,127	6,886	962	36,566	19,262
1863	78,055	39,081	9,158	919	36,540	19,992
1864	86,031	41,323	11,359	1,079	47,588	24,794
1865	95,067	42,733	12,478	1,155	50,089	29,592
1866	84,179	52,037	15,671	1,268	50,273	
1867	94,213	52,975	14,026	1,389	62,227	
1868	104,118	58,119	14,820	1,590	65,828	43,681
1869	112,743	57,983	16,273	1,687	73,754	49,802
1870	121,751	62,940	16,198	1,869	85,808	54,271
1871	130,116	66,292	15,524	2,052	91,332	64,288
1872	137,351	69,723	13,787	2,301	94,720	65,700
1873	141,610	70,086	12,507	2,336	107,593	69,461
1874	159,717	73,876	14,149	2,452	120,240	72,283
1875	171,563	78,650	15,021	2,693	130,930	78,027
1876	184,787	83,595	14,625	2,894	140,468	83,391
1877	200,067	88,951	15,344	3,077	147,863	89,539
1878	205,475	85,061	15,310	3,393	154,064	94,696
1879	216,404	86,633	15,432	3,453	156,769	98,468
1880	215,978	87,635	14,953	3,595	158,765	100,968
1881	211,237	88,068	13,898	3,737	163,855	105,541
1882	216,330	86,490	14,572	3,777	168,024	107,177
1883	222,846	86,709	15,957	3,930	174,611	112,584
1884	235,672	87,643	17,953	4,083	179,801	124,814
1885	250,097	89,758	19,519	4,242	184,001	116,028
1886	259,973	92,507	18,919	4,444	189,220	125,718
1887	272,448	89,940	22,661	4,888	196,907	129,297
1888	270,500	98,203	20,768	4,938	207,050	132,277
1889	275,302	104,174	21,044	5,255	215,905	143,733
1890	280,882	106,302	21,460	5,434	221,756	146,589
1891	285,775	110,270	22,587	5,659	229,986	153,599
1892	294,033	112,423	20,886	5,891	238,106	158,875
1893	302,474	115,886	22,164	6,136	232,501	157,673
1894	313,637	119,201	21,779	6,257	235,837	164,664
1895	323,130	122,637	20,502	6,589	241,322	170,861
1896	330,709	124,113	21,405	6,885	249,335	176,083
1897	340,952	123,994	20,770	7,190	247,061	180,209
1898	347,624	120,939	20,620	7,432	259,459	185,424
1899	350,124	118,642	22,957	7,366	265,364	195,540
1900	361,157	116,071	23,304	7,605	269,736	197,395
1901	372,945	116,545	24,463	7,810	258,977	188,730
1902	373,999	118,695	24,350	8,072	264,038	197,217
1903	390,141	117,892	29,200	8,333	288,776	212,884
1904	407,398	120,871	37,226	8,652	299,038	222,182
1905	419,315	126,300	42,092	9,026	315,226	239,491
1906	440,917	137,009	43,080	9,371	328,127	248,722
1907	435,405	136,094	34,406	9,714	335,645	247,880
1908	457,048	141,185	34,298	10,222	347,193	262,522

STATE TEXT-BOOKS.

Text-books for the pupils of the grammar schools of California are selected through the State Text-Book Committee, which consists of the Governor of California, the Superintendent of Public Instruction, and one member of the State Board of Education. The action of the committee is ratified by the State Board of Education, which enters into a contract for a period of from four to eight years with the firms owning the plates of the books desired, at a certain specified royalty per book sold. The books are printed in the State Printing Office and are supplied to the pupils of the State at the cost of production, which includes the cost of manufacture and the royalty, plus the cost of postage on the book.

The books are sold throughout the State by regular book dealers who have filed with the Superintendent of Public Instruction an affidavit agreeing to supply the books at the price fixed by the State Board of Education. There are something over four hundred dealers who handle State text-books. The price of the State text-books is fixed by the State Board just prior to the close of each fiscal year.

During all the years prior to July 1, 1904, there were sold 4,052,327 books, amounting to $1,429,297.52. The number of each kind sold and the amount of money received for them, as well as the royalty paid for the use of plates of certain books, is as follows:

Name of Book.	Number.	Amount.	School Book Fund.	Royalty Fund.
Revised First Reader	340,594	$54,495 04	$54,495 04	
Revised Second Reader	267,042	74,771 76	74,771 76	
Revised Third Reader	203,156	89,388 64	89,388 64	
Revised Fourth Reader	159,072	84,308 16	84,308 16	
Speller	368,116	90,482 25	90,482 25	
Primary Number Lessons	248,178	49,577 48	49,577 48	
Advanced Arithmetic	343,514	140,229 36	140,229 36	
Grammar School Arithmetic	2,029	1,014 50	750 73	$263 77
Lessons in Language	255,315	63,828 25	63,828 25	
Revised English Grammar	145,583	68,424 01	68,424 01	
History, Grammar School	32,862	26,618 22	16,759 62	9,858 60
U. S. History (old series)	137,434	96,203 80	96,203 80	
Elementary Geography	262,224	131,112 00	131,112 00	
Introductory Geography	1,940	1,067 00	824 50	242 50
Advanced Geography	155,359	158,425 38	158,425 38	
Grammar School Geography	1,517	1,486 66	1,061 90	424 76
Physiology	100,361	46,680 50	46,680 50	
Civil Government	49,638	22,833 48	22,833 48	
First Reader (old series)	337,952	50,692 80	50,692 80	
Second Reader (old series)	230,696	74,956 44	74,956 44	
Third Reader (old series)	129,843	66,116 96	66,116 96	
English Grammar (old series)	112,567	47,278 14	47,278 14	
Primer (new)	267	53 40	40 58	12 82
Second Reader (new)	268	75 04	55 74	19 30
Totals	4,052,327	$1,440,119 27	$1,429,297 52	$10,821 75

The total number of State text-books sold from July 1, 1904, to June 30, 1906, and the amount of the sales is set forth in the following table:

Name of Book.	Price of Books.	Number Sold.		Amount of Sales.	
		1904-1905.	1905-1906	1904-1905	1905-1906.
Third Reader (old series)	$0.40	589	378	$235 60	$151 20
First Reader (revised)	.16	28,480	1,236	4,556 80	197 76
Second Reader (revised)	.28	21,078	2	5,901 84	56
Third Reader (revised)	.44	19,965	466	8,784 60	205 04
Fourth Reader (revised)	.53	12,907	746	6,840 71	395 38
Primer (new)	.20	267	50,022	53 40	10,004 40
First Reader (new)	.24		46,051		11,052 24
Second Reader (new)	.28	268	53,454	75 04	14,967 12
Third Reader (new)	.42		57,353		24,088 26
Fourth Reader (new)	.49		51,867		25,414 83
Speller (old)	.19	21,200	22,915	4,028 00	4,353 85
Primary Number Lessons (old)	.20	5,759		1,151 80	
First Book in Arithmetic (new)	.28		24,565		6,878 20
Gram. School Arithmetic (new)	.50	93,421	31,654	46,710 50	15,827 00
Old English Grammar	.42	3	12	1 26	5 04
Lessons in Language (old)	.25	15,836		3,959 00	
Revised English Grammar (old)	.47	15,693	9,934	7,375 71	4,668 98
English Lessons, Book I	.28		1,184		331 52
English Lessons, Book II (new)	.46		1,152		529 92
History (old series)	.50	1	1	50	50
Introductory History (new)	.45	19,545	22,841	8,795 25	10,278 45
Grammar School History (new)	.81	22,015	17,612	17,832 15	14,265 72
Elementary Geography (old)	.50	15	12	7 50	6 00
Advanced Geography (old)	1.02	4	2	4 08	2 04
Introductory Geography (new)	.55	69,048	30,537	37,967 40	16,795 35
Grammar School Geog. (new)	.98	53,867	22,944	52,789 66	22,485 12
Physiology (new)	.50	5,165	2,298	2,582 50	1,149 00
Civil Government (old)	.46	2,556	829	1,175 76	381 34
Totals		407,682	450,067	$210,838 06	$184,434 82

The following prices of State text-books were fixed by the State Board of Education for the school year ending June 30, 1908:

Name of Book.	Cost Price at Sacramento.	Postage per Book.	By Mail.	Price to Pupils from Retail Dealers.
Primer (new)	20 cents.	5 cents.	25 cents.	25 cents.
First Reader (new)	24 cents.	5 cents.	29 cents.	29 cents.
Second Reader (new)	28 cents.	7 cents.	35 cents.	35 cents.
Third Reader (new)	42 cents.	8 cents.	50 cents.	50 cents.
Fourth Reader (new)	49 cents.	11 cents.	60 cents.	60 cents.
Speller, Book One (new)	19 cents.	5 cents.	24 cents.	24 cents.
Speller, Book Two (new)	19 cents.	5 cents.	24 cents.	24 cents.
First Book in Arithmetic (new)	28 cents.	7 cents.	35 cents.	35 cents.
Grammar School Arithmetic	50 cents.	10 cents.	60 cents.	60 cents.
English Lessons, Book I	28 cents.	7 cents.	35 cents.	35 cents.
English Lessons, Book II	46 cents.	9 cents.	55 cents.	55 cents.
Introductory History	45 cents.	10 cents.	55 cents.	55 cents.
Grammar School History	81 cents.	14 cents.	95 cents.	95 cents.
Introductory Geography	55 cents.	9 cents.	64 cents.	64 cents.
Grammar School Geography	98 cents.	22 cents.	$1.20	$1.20
Physiology and Hygiene	41 cents.	8 cents.	49 cents.	49 cents.
Writing Book—One	6 cents.	2 cents.	8 cents.	8 cents.
Writing Book—Two	6 cents.	2 cents.	8 cents.	8 cents.
Writing Book—Three	6 cents.	2 cents.	8 cents.	8 cents.
Writing Book—Four	6 cents.	2 cents.	8 cents	8 cents.
Writing Book—Five	6 cents.	2 cents.	8 cents.	8 cents.
Revised First Reader	16 cents.	4 cents.	20 cents.	20 cents
Revised Fourth Reader	53 cents.	7 cents.	60 cents.	60 cents.
First Reader (old series)	15 cents.	5 cents.	20 cents.	20 cents
Second Reader (old series)	33 cents.	8 cents.	41 cents.	40 cents.
English Grammar (old series)	42 cents.	8 cents.	50 cents.	50 cents.
United States History (old series)	50 cents.	12 cents.	62 cents.	65 cents.
Elementary Geography (old series)	50 cents.	10 cents.	60 cents.	60 cents.
Advanced Geography (old series)	$1 02	18 cents.	$1.20	$1.20
Speller (old series)	19 cents.	6 cents.	25 cents.	25 cents.

The total number of State text-books sold from July 1, 1906, to June 30, 1907, the amount of the sales, and the royalty paid for the use of the plates of the several books, follows:

Books.	Number of Books Sold.	Paid into School Book Fund.	Paid into Royalty Fund.	Total Amount of Sales.
Primer	32,307	$4,910 67	$1,550 73	$6,461 40
First Reader	29,596	5,445 65	1,657 39	7,103 04
Second Reader	27,877	5,798 44	2,007 12	7,805 56
Third Reader	31,263	10,004 16	3,126 30	13,130 46
Fourth Reader	26,654	9,861 98	3,198 48	13,060 46
Speller	21,674	4,118 06		4,118 06
First Book in Arithmetic	54,113	11,363 73	3,787 91	15,151 64
Grammar School Arithmetic	26,392	9,765 04	3,430 96	13,196 00
English Lessons—Book I	99,412	19,882 40	7,952 96	27,835 36
English Lessons—Book II	73,156	24,873 04	8,778 72	33,651 76
Introductory History	21,374	6,412 20	3,206 10	9,618 30
Grammar School History	18,831	9,603 81	5,649 30	15,253 11
Introductory Geography	30,244	12,853 71	3,780 49	16,634 20
Grammar School Geography	22,920	16,044 00	6,417 60	22,461 60
Physiology and Hygiene	22,291	6,464 39	2,674 92	9,139 31
Revised First Reader	1	16		16
Revised Fourth Reader	6	3 18		3 18
First Reader (old series)	4	60		60
Second Reader (old series)				
Third Reader (old series)	338	115 20		115 20
English Grammar (old series)	25	10 50		10 50
Elementary Geog. (old series)	1	50		50
Advanced Geography (old series)	7	7 14		7 14
U. S. History (old series)	1	50		50
Totals	538,487	$157,539 06	$57,218 98	$214,758 04

The various book companies receiving royalty upon books used by the State, the rate of royalty, and the amount paid each firm from July 1, 1906, until June 30, 1907, is as follows:

Ginn & Company.

	No. Books Sold.	Rate of Royalty	Amount of Royalty.
Primer	32,307	.048	$1,550 73
First Reader	29,596	.056	1,657 39
Second Reader	27,877	.072	2,007 12
Third Reader	31,263	.10	3,126 30
Fourth Reader	26,654	.12	3,198 48
Totals	147,697		$11,540 02

D. C. Heath & Company.

Introductory History	21,374	.15	$3,206 10
Physiology and Hygiene	22,291	.12	2,674 92
Totals	43,665		$5,881 02

American Book Company.

First Book in Arithmetic	54,113	.07	$3,787 91
Grammar School Arithmetic	26,392	.13	3,430 96
English Lessons—Book I	99,412	.08	7,952 96
English Lessons—Book II	73,156	.12	8,778 72
Grammar School History	18,831	.30	5,649 30
Grammar School Geography	22,920	.28	6,417 60
Totals	294,824		$36,017 45

MacMillan Book Company.

Introductory Geography	30,244	.125	$3,780 49

Summary.

Total number of books sold during year 1906-1907	538,487
Total amount of sales	$214,758 04
Total number of books on which royalty was paid	516,430
Total amount of royalty paid	$57,218 98

The total number of State text-books sold from July 1, 1907, to June 30, 1908, the amount of the sales, and the royalty paid for the use of the plates of the several books follows:

Books.	Number of Books Sold.	To School Book Fund.	To Royalty Fund.	Amount of Sales.
Primer	33,549	$5,099 44	$1,610 36	$6,709 80
First Reader	28,851	5,308 59	1,615 65	6,924 24
Second Reader	25,481	5,300 06	1,834 62	7,134 68
Third Reader	21,995	7,038 40	2,199 50	9,237 90
Fourth Reader	18,114	6,702 18	2,173 68	8,875 86
Speller—Book I	103,972	17,155 38	2,599 30	19,754 68
Speller—Book II	49,213	8,120 13	1,230 34	9,350 47
First Book in Arithmetic	42,348	8,893 08	2,964 36	11,857 44
Grammar School Arithmetic	20,742	7,674 54	2,696 46	10,371 00
English Lessons—Book I	33,418	6,683 60	2,673 44	9,357 04
English Lessons—Book II	26,693	9,075 62	3,203 16	12,278 78
Introductory History	15,989	4,796 70	2,398 35	7,195 05
Grammar School History	17,043	8,691 93	5,112 90	13,804 83
Introductory Geography	26,043	11,068 26	3,255 39	14,323 65
Grammar School Geography	21,354	14,947 80	5,979 12	20,926 92
Physiology and Hygiene	24,045	6,973 05	2,885 40	9,858 45
Writing Book—One	6,695	334 75	66 95	401 70
Writing Book—Two	6,708	335 40	67 08	402 48
Writing Book—Three	3,353	167 65	33 53	201 18
Writing Book—Four	3,101	155 05	31 01	186 06
Writing Book—Five	3,047	152 35	30 47	182 82
Speller (old)	1,624	308 56		308 56
Revised First Reader	22	3 52		3 52
Revised Fourth Reader	89	47 17		47 17
First Reader (old series)	50	7 50		9 50
	20	2 00		
Second Reader (old series)	76	3 80		24 26
	62	20 46		
Third Reader (old series)	85	34 00		34 00
English Grammar (old series)	20	1 00		8 56
	18	7 56		
Elementary Geography (old series)	26	2 60		19 10
	33	16 50		
Advanced Geography (old series)	50	5 00		19 28
	14	14 28		
U. S. History (old series)	27	2 70		61 70
	118	59 00		
Totals	534,088	$135,209 61	$44,661 07	$179,870 68

The various book companies receiving royalty upon books used by the State, the rate of royalty, and the amount paid each firm from July 1, 1907, until June 30, 1908, follows:

Ginn & Company.

	No. Books Sold.	Rate of Royalty.	Amount of Royalty.
Primer	33,549	.048	$1,610 36
First Reader	28,851	.056	1,615 65
Second Reader	25,481	.072	1,834 62
Third Reader	21,995	.10	2,199 50
Fourth Reader	18,114	.12	2,173 68
Totals	127,990		$9,433 81

D. C. Heath & Company.

Introductory History	15,989	.15	$2,398 35
Physiology and Hygiene	24,045	.12	2,885 40
Totals	40,034		$5,283 75

American Book Company.

First Book in Arithmetic	42,348	.07	$2,964 36
Grammar School Arithmetic	20,742	.13	2,696 46
English Lessons, Book I	33,418	.08	2,673 44
English Lessons, Book II	26,693	.12	3,203 16
Grammar School History	17,043	.30	5,112 90
Grammar School Geography	21,354	.28	5,979 12
Writing Book—One	6,695	.01	66 95
Writing Book—Two	6,708	.01	67 08
Writing Book—Three	3,353	.01	33 53
Writing Book—Four	3,101	.01	31 01
Writing Book—Five	3,047	.01	30 47
Totals	184,502		$22,858 48

MacMillan Book Company.

Introductory Geography	26,043	.125	$3,255 39
Speller—Book I	103,972	.025	2,599 30
Speller—Book II	49,213	.025	1,230 34
Totals	179,228		$7,085 03

Summary.

Total number of books sold during year 1907-1908	534,088
Total amount of sales	$179,870 68
Total number of books on which royalty was paid	531,754
Total amount of royalty paid	$44,661 07

SUMMARY OF STATISTICS.

HIGH SCHOOLS.

	1907.	1908.
Number of counties maintaining	51	52
High School districts—		
County	14	15
City	41	38
District	32	33
Union	86	94
Joint Union	6	7
Total	179	187
Number of teachers employed—		
Men	420	480
Women	768	834
Total	1,188	1,314
Number of pupils enrolled—		
First year — Boys	5,327	7,079
Girls	7,101	7,853
Second year—Boys	2,941	3,338
Girls	4,312	4,820
Third year — Boys	1,763	2,215
Girls	2,614	2,963
Fourth year—Boys	1,341	1,425
Girls	2,179	2,276
Total—Boys	11,372	14,102
Girls	16,206	17,912
Grand Total	27,578	32,014
Average daily attendance	21,337	24,267
Number of graduates during year—		
Boys	1,100	1,187
Girls	1,790	1,981
Total	2,890	3,168
Average length of term (days)	193	192
Number of teachers attending institute	1,134	1,274
Number of volumes in high school library	154,183	150,189
Financial Statement.		
Receipts—		
Balance on hand	$1,059,446 43	$1,216,637 60
From State Fund	240,950 19	307,169 65
From taxes of all kinds	2,026,682 28	2,418,123 91
From miscellaneous sources	429,576 56	37,739 99
Total	$3,756,655 46	$3,979,671 15

HIGH SCHOOL—Continued.

	1907.	1908.
Financial Statement—Continued.		
Expenditures—		
For teachers' salaries	$1,315,000 73	$1,635,578 18
For supplies, etc.	420,382 24	488,395 90
For buildings	736,797 91	915,116 96
For books and apparatus	57,499 91	55,844 48
Total	$2,529,680 79	$3,154,935 52
Balance on hand at close of year	$1,226,974 67	$824,735 63
Valuation of all Property.		
Sites, buildings, and furniture	$5,277,529 00	$6,174,333 00
Laboratories	195,262 00	220,679 00
Libraries	153,409 00	176,370 00
Total	$5,626,200 00	$6,571,382 00

NORMAL SCHOOLS (STATE).

	1907.	1908.
Number of State Normal Schools	5	5
Number of teachers employed—		
Men	37	41
Women	79	85
Total	116	126
Number of students enrolled in Normal Department—		
Men	105	144
Women	1,664	2,041
Total	1,769	2,185
Number of students enrolled in Training Department—		
Boys	950	918
Girls	1,159	1,108
Total	2,109	2,026
Number of graduates since the establishment of the first school—		
Men 768		
Women 7,337		
Total 8,105		
Number of graduates teaching in the schools of this State—		
From Chico	333	357
From Los Angeles	949	932
From San Diego	176	211
From San Francisco	295	339
From San Jose	1,417	1,477
Total	3,170	3,316
Financial Statement.		
Receipts from—		
Balance on hand	$115,029 19	$400,291 85
Appropriations	295,550 00	222,368 16
Tuition and other sources	4,433 27	5,053 04
Total	$415,012 46	$627,713 05

NORMAL SCHOOLS (STATE)—Continued.

	1907.	1908.
Financial Statement—Continued.		
Expenditures for—		
Teachers' salaries	$171,167 08	$173,048 49
Janitors, gardeners, etc.	33,429 64	39,510 39
Sites, buildings, furniture	60,991 58	109,912 46
Library books and apparatus	9,197 41	6,304 97
Total	$274,785 71	$328,776 31
Balance on hand	$140,226 75	$298,936 74
Valuation of all Property.		
Grounds	$421,000 00	$431,000 00
Buildings	593,790 00	658,790 00
Furniture	37,855 92	45,791 00
Libraries	72,011 33	56,871 00
Apparatus	25,109 72	25,487 00
Total	$1,149,766 97	$1,217,939 00
Libraries.		
Number of books at beginning of year	45,129	51,844
Number of volumes bought	5,644	5,168
Number of volumes donated	440	432
Number worn out or destroyed	169	234
Total at close of year	51,844	57,210
Number of acres of land in grounds	47.30	48.15

PRIMARY AND GRAMMAR SCHOOLS.

		1907	1908.
CENSUS STATISTICS.			
Number of families listed with children		245,460	270,224
Number of children between 5 and 17 years of age—			
White—	Boys	214,956	226,393
	Girls	211,169	221,576
	Total	426,125	447,969
Negro—	Boys	1,426	1,439
	Girls	1,484	1,501
	Total	2,910	2,940
Indian—	Boys	1,738	1,736
	Girls	1,588	1,538
	Total	3,326	3,274
Mongolian—	Boys	1,919	1,764
	Girls	1,125	1,101
	Total	3,044	2,865
Total number of census children—			
	Boys	220,039	231,332
	Girls	215,366	225,716
	Total	435,405	457,048

PRIMARY AND GRAMMAR SCHOOLS—Continued.

	1907.	1908.
CENSUS STATISTICS—Continued.		
Number of children between 5 and 17 years of age attending—		
Public schools	319,190	342,524
Private schools	34,406	34,298
No school (this includes a large number over 5 but not 6)	81,809	80,226
Number of children under 5 years of age—		
White	132,749	137,493
Negro	879	861
Indian	1,170	1,164
Mongolian	1,296	1,667
Total	136,094	141,185
Nativity of children—		
Foreign born	11,173	11,760
Native born	560,326	586,473
Total number of children under 17 years of age	571,499	598,233
Number of children who are deaf	366	392
Number of children under 17 years of age not vaccinated	121,874	129,376
SCHOOL STATISTICS.		
Number of school districts at beginning of year	3,202	3,204
Number organized	45	63
Number lapsed during year	—28	—33
Number combined out of existence	—16	—10
Total at close of year	3,203	3,224
Number of schoolhouses (includes high schools)—		
Brick	189	219
Stone	9	13
Adobe	8	6
Wood	3,662	3,757
Total	3,868	3,995
Grade of schools—		
Primary	2,296	1,997
Grammar	3,882	3,792
Number of teachers employed in—		
Men	813	839
Women	7,433	7,763
Total	8,246	8,602
Grade of teachers' certificates in Primary and Grammar Schools—		
High School	426	368
Grammar School	7,510	7,913
Primary	188	140
Special	122	181
Total	8,246	8,602
Enrollment in schools—		
Primary grades— Boys	99,657	100,200
Girls	89,284	90,181
Grammar grades—Boys	50,987	52,952
Girls	54,457	55,592
Total—Boys	150,644	153,152
Girls	143,741	145,773
Grand total	294,385	298,925

PRIMARY AND GRAMMAR SCHOOLS—Continued.

	1907.	1908.
SCHOOL STATISTICS—Continued.		
Average number belonging to school	234,624	245,048
Average daily attendance	221,578	232,325
Number of districts maintaining school—		
Less than 120 days for the year	24	25
Between 120 and 160 days	422	289
Between 160 and 200 days	2,435	2,599
200 days or over	309	294
Total	3,190	3,187
Average number of days the schools were open	171	171
Average number of months the teachers have taught in present positions	31	31
Average amount paid teachers in primary and grammar schools—		
Men	$828 11	$883 39
Women	623 23	559 09
Number of school visits made by County Superintendents	15,531	18,899
Number of visits made by School Trustees	17,165	18,484
Number of visits made by other persons	190,818	220,755
Number of volumes in school libraries	741,405	806,962
Number in county teachers' libraries	43,687	47,765
Financial Statement.		
Receipts from—		
Balance on hand	$2,787,421 14	$2,654,821 83
State apportionments	4,059,429 04	4,190,168 11
County apportionments	2,866,479 07	4,013,163 58
City or district taxes	937,001 14	718,111 15
Sale of bonds	1,374,395 58	1,469,573 33
Miscellaneous sources	163,618 31	592,762 52
Total	$12,188,344 28	$13,638,600 52
Expenditures for—		
Teachers' salaries	$5,943,075 78	$6,862,706 96
Supplies, etc.	1,565,926 43	1,785,908 39
Sites, buildings, and furniture	1,882,358 76	2,242,501 82
Library books and apparatus	106,496 79	97,104 72
Total	$9,497,857 76	$10,988,221 89
Balance on hand at close of year	$2,690,486 52	2,650,378 63
Valuation of School Property.		
Sites, buildings, and furniture	$25,734,616 00	$26,836,402 00
School libraries	879,403 00	858,275 00
Apparatus	363,768 00	371,649 00
Total	$26,977,787 00	$28,066,326 00

NIGHT SCHOOLS.

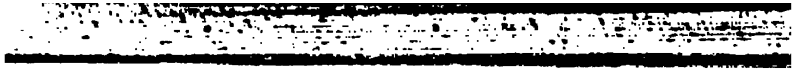
	1907.	1908.
Number of cities maintaining	7	6
Number of teachers—		
Men	42	57
Women	67	70
Total	109	127
Grade of certificates held by teachers—		
High School	20	24
Grammar School	68	87
Primary	3	3
Special	18	13
Total	109	127
Students enrolled—		
Boys	7,032	8,872
Girls	1,183	1,600
Total	8,215	10,472
Average number belonging	2,541	3,456
Average attendance	2,142	2,860
Average number of nights schools were open	186	183
Average number of months same teachers have taught	58	61
Average amount per annum paid teachers	$518 76	$828 27
Number of teachers attending institute	105	122
Number of volumes in libraries	2,027	1,711
Financial Statement.		
Receipts—		
Balance on hand		
From taxes	$81,788 60	$127,021 45
Total	$81,788 60	$127,021 45
Expenditures—		
For teachers' salaries	$67,623 95	$93,908 25
For supplies, etc.	14,164 65	33,113 20
Total	$81,788 60	$127,021 45
Balance on hand		
Valuation of Property.		
Sites, buildings, and furniture	$17,000 00	$15,000 00
Books and apparatus	2,178 00	1,500 00
Total	$19,178 00	$16,500 00
(This valuation is necessarily low, as most of the night schools are held in grammar or high school buildings.)		

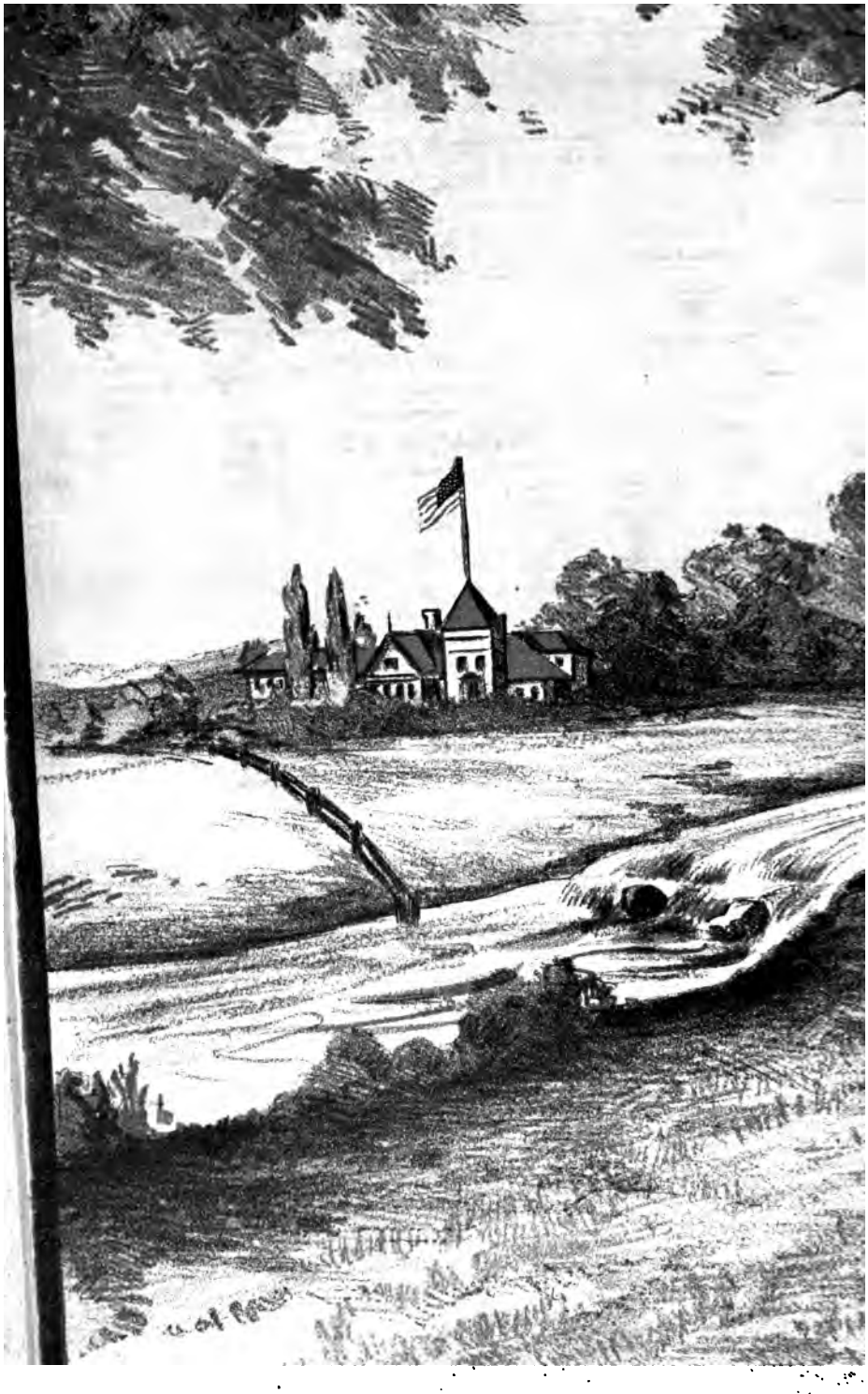
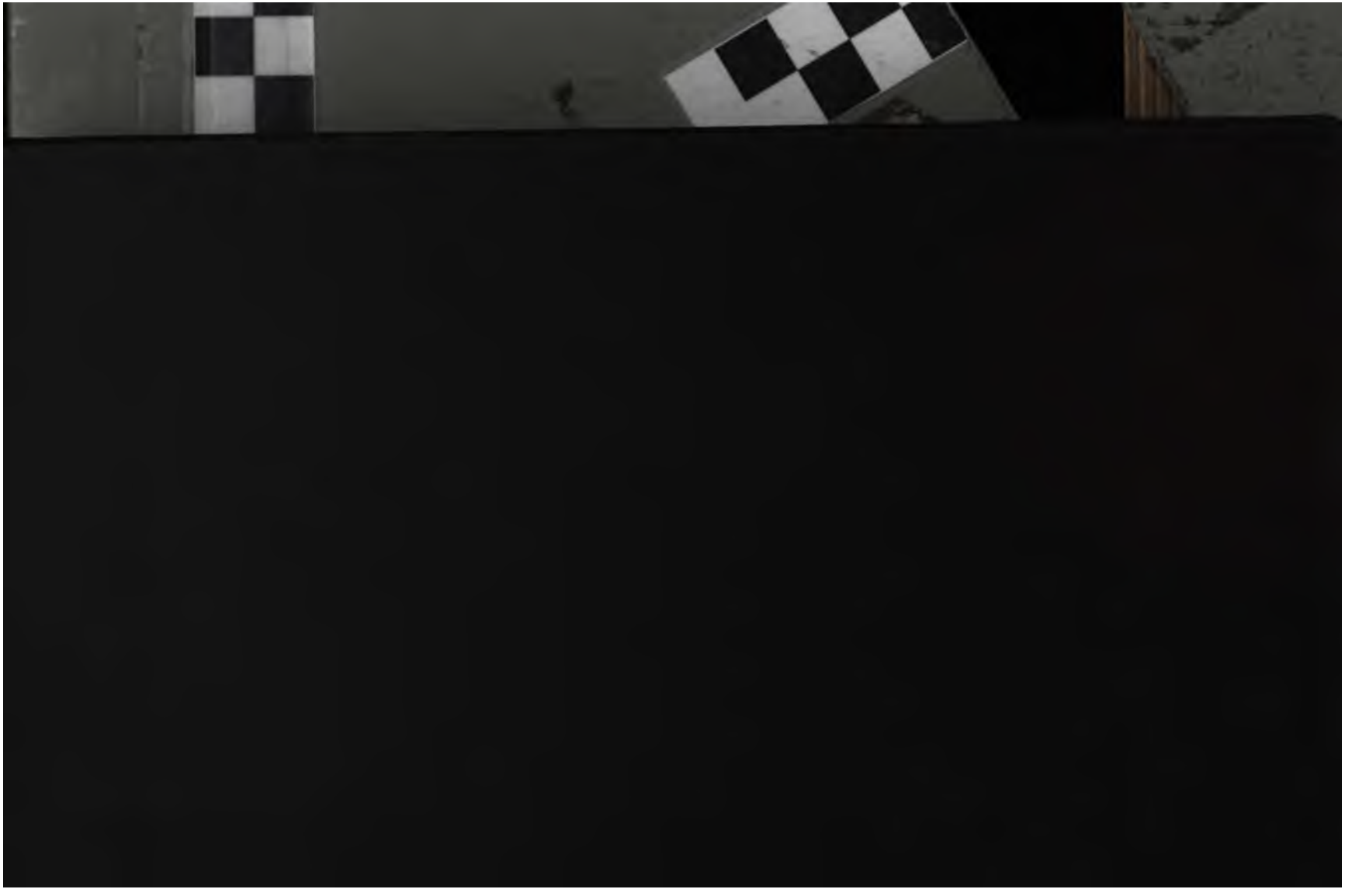
PUBLIC KINDERGARTEN SCHOOLS.

	1907.	1908.
Number of cities maintaining	13	14
Number of teachers (women)	171	179
Grade of certificates held—		
Kindergarten primary	114	130
Special	57	49
Total	171	179
Pupils enrolled—		
Boys	2,708	3,852
Girls	2,759	2,830
Total	5,467	5,782
Average number belonging	3,107	3,343
Average daily attendance	2,823	3,070
Average number of days school was open	180	187
Average term in months teachers have taught	37	39
Average amount per year paid teachers	$637 66	$696 95
Financial Statement.		
Receipts from—		
Balance on hand	$3,870 08	$3,737 22
From taxes	108,204 88	149,689 18
From donations		40 00
Total	$112,074 96	$153,466 40
Expenditures for—		
Teachers' salaries	$96,874 95	$128,738 26
Supplies, etc.	11,448 22	11,464 62
Buildings	1,054 57	12,323 13
Total	$109,377 74	$152,526 01
Balance on hand	$2,697 22	$940 39
Valuation of Property.		
Sites, buildings, and furniture	$53,850 00	$73,491 00
Books and apparatus	3,295 00	10,834 00
Total	$57,145 00	$84,325 00
Number of volumes in libraries of kindergartens	373	411
Number of teachers attending institute	156	176

AVERAGE SALARIES PAID TEACHERS.

	1907.	1908.
Average annual amount received by—		
City Superintendents—Men	$2,124 55	$2,306 50
Principals of High schools—Men	$1,578 79	$1,663 24
Women	1,290 0	1,143 87
Principals of Primary and Grammar schools—Men	$973 59	$1,032 64
Women	773 68	802 08
Teachers in High schools—Men	$1,123 39	$1,151 75
Women	977 12	1,012 41
Teachers in Grammar schools—Men	$693 42	$702 14
Women	617 48	648 14
Teachers in Primary schools—Men	$680 75	$641 08
Women	627 13	650 04
Teachers in Kindergarten schools—Men		
Women	$639 22	$685 56
Teachers in Night schools—Men	$798 17	$607 85
Women	545 14	610 79
Paid all men teachers and principals	$957 93	$1,036 01
Paid all women principals and teachers	650 32	697 09
Paid all men and women	688 64	743 71
Expenditure for Institutes.		
Total paid instructors	$10,341 20	$11,148 08
Total for general expenses, halls, etc.	2,859 55	2,467 06
Office Expenses.		
Paid for postage, expressage, etc.	$5,933 46	$6,095 46
Binding school documents	252 60	263 70
Paid for books for teachers' library	2,086 63	3,454 77

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